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the journal

OF THE OKLAHOMA STATE MEDICAL ASSOCIATION

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Editorials

Orthoëpy and I

It is surprising that the great majority of physicians, traditionally trained to exercise unusual care in the practice of medicine, permit themselves to be careless with medical words. Carelessness in speech is an old American custom. Numerous writers such as Petroleum V. Nasby and George Ade capitalized on this almost universal failing. Currently we are amused by the weird and whimsical pronunciations of our friend Pogo and his Neighbors in Okeefenochee swamp.

It is possible that the common mis-pronunciation of medical words which are used with regularity is because interns and resident staff pronounce words as they hear them used by their senior staff members and perhaps even by their teachers while in medical school. If this be true we should assume an individual responsibility in exercising care in our technical speech. If this were done for one year all of us would profit by having become more proficient in the use of the spoken word.

Just for fun look at the following list of 12 words, pronounce them immediately, and check how you said them on the appropriately phonetically spelled example. Now turn to page 2 where the correct pronunciations are given. If you get eight correct you are very good; ten is excellent and if you get more than ten you may consider yourself to be first-class orthoëpist.

1. Salicylate—(a) sa LIS i late (b) sal i SIL ate (c) SAL i sil ate.
2. Abdomen—(a) AB do men (b) ab DO men (c) ab DOM en.
3. Hyperpnea—(a) hy perp NEE a (b) hy PERP ne a (c) HY perp ne a.
4. Poliomyelitis—(a) Pahl e o my e li tis (b) POLE e o my e li tis (c) pole e o MY e LI tis.
5. Trichomonas—(a) tri KOM o nas (b) tri ko MO nas (c) TRIK o mo nas.
6. Vertebral (a) ver TEE bral (b) VER te bral (c) ver TIB ral.
7. Esophageal—(a) e SOF a je al (b) e sof a JEE al (c) e so FAJ e al.
8. Cavernous—(a) KAV er nus (b) ka VER nus (c) ka VER NUS.
9. Caffein—(a) CAF fe in (b) caf FEEN (c) CAF een.
10. Respiratory—(a) RES pi ra to ry (b) re SPI ra to ry (c) res pi ra TORY.
11. Flaccid—(a) FLAS sid (b) FLAK sid (c) FLAY sid.
12. Menarche—(a) men ARCH (b) men ARK (c) me NAR kah.

If you don't believe it, check the list in a good medical and a good standard dictionary, which reminds us—that is what we started to editorialize about in the first place.

Acute Respiratory Infections

Haight, T. H., Kahn, F. H., and Ziegra, Sumner[1] studied the efficacy of erythromycin and penicillin on ordinary respiratory infections in a group of 269 male navy recruits. The men, as the diagnosis was made, were placed in rotation on erythromycin, penicillin or a placebo. There was no appreciable difference in the course of the illness in any of the three groups except in patients in whom there was a Group A Hemolytic Streptococcal infection. They point out that similar results have been obtained from like studies using aureomycin hydrochloride and oxytetracycline (terramycin).

The difficulty of an accurate clinical diagnosis of a causative organism was apparent in the study. Suggestive evidence of a streptococcal infection aside from laboratory data is an exudative pharyngitis with tender regional lymph nodes. Influenzal infections were accompanied by an increased prevalence of non-productive cough and substernal aching. Most all the patients felt ill; the great majority complained of sore throat, and about two-thirds had either coryza or nasal congestion. Since neither influenzal nor other nonbacterial infections were influenced by the antibiotics used, the differentiation between the two is unimportant. One would, however, like to be able to separate the Group A Hemolytic Streptococcal infections from the non-bacterial. One dif-

1. Armed Forces Medical Journal 5:1405 (Oct.) 1954.

ferential point illustrated by them but not stressed is the effect of both erythromycin and penicillin in streptococcol infections on fever. There was an abrupt drop to near normal within 24 to 48 hours. This would indicate that one is not dealing with a sensitive organism if the temperature persists longer and the value of continued antibiotic therapy is questionable even if apparently indicated at the onset.

From this study the authors conclude: "it appears that the routine use of erythromycin or penicillin in the treatment of viral or related non-bacterial respiratory infections is of little or no value in affecting the acute infection, and for economic and medical reasons should be avoided." They perhaps should have added "in the age group studied."

Another Name But Still Paternalism

The commercial insurance companies and Blue Cross have their collective finger in the dyke against the flood of public demand for social medicine. Such security against the paralyzing cost of serious or protracted illness is desirable. There are facets of this arrangement, however, that smack of a paternalism which, if from statism, we would abhor, and that preclude complete honesty of both the patient and the doctor.

The fact that the patient has hospital insurance and not the nature or seriousness of his sickness may be the determining factor in whether or not he is to be hospitalized. The existence of surgical benefits may similarly affect his decision to be or not to be operated on. Not too long ago the termination of the illness and the ability of the patient to take care of himself at home marked the end of his hospital stay.

The most serious defects in this whole arrangement, which is for the most part quite satisfactory, are the exclusions and the specified stipulated coverages. The doctor, if it is at all possible, will make a diagnosis that will permit the patient to collect on his insurance. There is no quarrel with this, but it does preclude strict medical honesty in the matter of records and perhaps also in thinking.

These insidious inroads on the integrity of our people and our patients would be obviated if the patient had to share somewhat in the financial responsibility, over and above the cost of his premium. If each day in the hospital cost the patient a little bit, he would not go to the hospital unless he needed to nor would he stay longer than necessary. He would, however, be protected against the financial calamity that illness may result in. The insurance carriers might save enough in this manner to eliminate exclusions from their contracts. The will to get well would no longer be lessened by the paternalism of the insurance companies and the doctor could write on the chart what he found and what he thought and not just words acceptable under the patient's contract.

Answers to Diction Quiz

1-c; 2-b; 3-a; 4-a; 5-a; 6-b; 7-c; 8-a; 9-a; 10-b; 11-b; 12-c.

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Scientific Article

ANGIOCARDIOGRAPY *in Congenital Malformations of the* HEART *and* GREAT VESSELS *Amenable to* SURGICAL CORRECTION

SIMON DOLIN, M.D.

Angiocardiography consists of the X-ray examination of the cardiac chambers and great vessels during the opacification by an intravenously injected radio-opaque contrast medium. Serial roentgenograms are obtained at an interval of one half second.

Angiocardiography has been a helpful method in the analysis of the various types of congenital malformations of the heart and in the study of acquired heart diseases as well. During the last decade, it has become a standard clinical procedure and an essential part of the investigative methods of cardio-vascular diseases.

Angiocardiography has contributed toward a more effective interpretation of the conventional fluoroscopic and radiographic examinations of the heart, leading to a better understanding of the physiopathology of the cardiovascular system. Our classical concepts have varied considerably since angiocardiography became an accepted clinical procedure.

The technique of angiocardiography has been simplified by the use of a serial casette changer, allowing multiple fast exposures. With the Fairchild camera one can take two exposures in a second. The contrast medium (Urokon-Sodium 70 per cent) is injected rapidly into the antecubital vein. General anesthesia is preferable for small children, local anesthesia for adults and bigger children. The amount to be injected varies: 40-50 cc. for adults, and 1 cc. per kg. body weight for children. The injection has to be done rapidly, usually within a period of 1.5 to two seconds. As soon as the contrast medium is injected, the exposures are taken in rapid succession, as mentioned above. In an average case, 15 exposures are taken in order to visualize the right and left cardiac chambers, and the great vessels. A roentgenogram of the urinary system may be taken immediately after the angiocardiographic procedure in order to detect any possible abnormalities of the urinary tract.

THE AUTHOR

Simon Dolin, M.D., is assistant professor in radiology at the University of Oklahoma School of Medicine. From the Department of Radiology, University and Crippled Children's Hospitals, University of Oklahoma, School of Medicine. Part of this paper was exhibited at the Oklahoma State Medical Association meeting, May, 1954, Oklahoma City, Oklahoma.

Sensitivity tests are performed prior to the procedure. The sensitivity test consists of an injection of 0.1 cc. of the contrast medium intradermally or, diluted with saline, intravenously. The patient is observed for 10 to 15 minutes, and in case sensitivity reactions (urticaria, rapid pulse changes, etc.) are noted, the examination is postponed.

Reactions: The usual immediate reaction is the perception of a metallic or bitter taste in the mouth. This is followed by a sensation of intense heat over the entire body. This sensation vanishes after five to 10 minutes. A generalized weakness and a fall in the systolic blood pressure is also noted. Dizziness and vomiting is a rare manifestation.

The greatest value of angiocardiography has been in the diagnosis of congenital malformations of the heart, and especially in the detection and selection of those malformations that are amenable to surgical correction. Recent advances in cardiac surgery have enabled the correction of the following congenital malformations of the heart and great vessels:

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Fig. 1 A

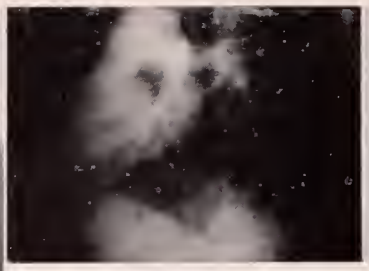

Fig. 1 B

Fig. 1 C

1. Pulmonary Artery Stenosis.
   a. Isolated Valvular stenosis
   b. Infundibular stenosis
2. Tetralogy of Fallot.
3. Interatrial Septal Defects.
4. Patent Ductus Arteriosus.
5. Coarctation of the Aorta.
6. Other Congenital Vascular Anomalies.

Isolated Pulmonary Valvular Stenosis

Congenital stenosis of the pulmonary artery is usually associated with other congenital abnormalities such as interatrial septal defects or an overriding aorta. However, recent studies have demonstrated that "isolated" pulmonary stenosis, particularly of the valvular type, is not an uncommon condition. It may be the result of a foetal endocarditis involving the pulmonary cusps after the septa have closed (Abbott), or a developmental arrest (Gross). Above the stenosis the pulmonary artery is generally dilated, giving rise to the so-called "post-stenotic dilation," the exact mechanism of which is not yet entirely clear. The right ventricle and conus are hypertrophic and often dilated.

Cyanosis may never appear or may be slight and late in onset. It depends on the degree of the pulmonary obstruction and it is primarily due to a diminished blood supply to the lungs and the resulting changes of the pulmonary arterioles, and an interference with oxygenation. Clubbing of the fingers is proportional to the cyanosis.

The main symptom is dyspnea on exertion. Epistaxis is not uncommon. A harsh systolic murmur and a systolic thrill are usually perceived in the second left interspace close to the sternum, radiating to the left clavicle and into the left side of the neck. The murmur is often heard over the entire precordium.

Roentgenograms of the chest reveal either a normal or a slightly enlarged cardiac silhouette. Hypertrophy involves the right ventricle, and the apex of the heart may be blunt and turned up. The pulmonary artery segment is prominent. The vascular lung markings are scant, particularly at the periphery. However, good vascularity of the lungs on the roentenogram is by no means contradictory to the diagnosis of pulmonary stenosis, particularly in older children. Collateral circulation via bronchial arteries and also via the collaterals arising from mediastinal, esophageal, internal mammary, pericardial, and other arteries, is early established (Christeller, Ruysch). Electrocardiogram usually shows a right axis deviation.

Cardiac catherization shows normal blood oxygen saturation levels in the chambers of the right heart and pulmonary artery, whereas the pressure in the pulmonary artery is lower than in the right ventricle. The fall in the arterial pressure may be abrupt, indicating the site of the stenosis.

Angiocardiography may demonstrate the actual site of the narrowing, the post-stenotic dilatation of the pulmonary artery, and the right ventricular dilatation.

Surgery is directed toward the correction of the stenosis and the amelioration of the pulmonary circulation. The Brock-Knife valvulotomy is the procedure of choice. The operative results are quite promising and discussion of the latter is beyond the scope of this paper.

Case Report. Case I: A.F. #187-991.

A 14-year old white male exhibited easy fatigability and an exertional dyspnea since the age of five. He had repeated episodes of upper respiratory infections.

A grade III systolic murmur was heard over the entire precordium with the maximum intensity over the second and third intercostal spaces on the left. Blood pressure: 120/80; pulse: 76. EKG: Incomplete right bundle branch block and right ventricular hypertrophy.

Roentgenogram of the chest (Fig. 1, A) revealed an enlargement of the cardiac silhouette. There was a prominence of the pulmonary artery segment and a scarce vascularity of the peripheral parts of the lungs. Angiocardiogram in the left anterior oblique position (Fig. 1, B and 1, C) revealed a stenosis of the pulmonary artery at the valve with a post-stenotic dilation as well as a dilatation of the right ventricle.

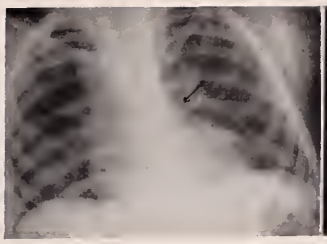

Fig. 2 A

Fig. 2 B

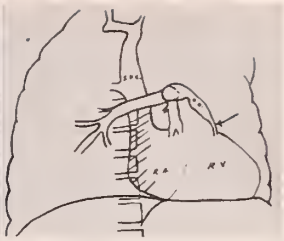

Fig. 2 C

Cardiac catheterization revealed a markedly increased pressure in the right ventricle.

The patient was operated and a Brock-Knife valvulotomy for the stenosis of the pulmonary valve was performed. The patient had an uneventful post-operative course and when re-examined a year later, showed considerable symptomatic improvement.

Infundibular Stenosis of the Pulmonary Artery

Infundibular stenosis of infravalvular stenosis of the pulmonary artery is usually associated with other congenital malformations of the heart, such as interventricular septal defects and overriding aorta, thus forming one of the main components of the tetralogy of Fallot. The degree of stenosis of the conus varies, and in rare cases, the infundibulum may be atrophied, and the conus reduced to a short narrow passage. The pulmonary artery may be dilated distal to the stenosis, the dilatation extending as far as the bifurcation or beyond. In many cases the pulmonary artery is either normal in caliber or hypoplastic throughout its initial course.

The clinical picture in the rare cases of isolated infundibular stenosis resembles the one seen in cases of isolated valvular stenosis, (see above) and depends greatly on the degree of the pulmonary obstruction. The physical findings are essentially the same. Electrocardiogram may show right axis deviation.

Roentgenogram of the chest may show a normal cardiac silhouette or an enlargement of the right ventricle. A concavity at the site of the pulmonary artery segment is usually present resembling the configuration seen in tetralogy of Fallot. The pulmonary vascularity depends on the degree of the collateral circulation.

Cardiac catheterization reveals a gradual fall in the arterial pressure of the pulmonary conus in contrast to a high pressure in the right ventricle.

Angiocardiography may demonstrate the actual narrowing of the infundibulum as well as the right ventricular hypertrophy and, in many cases, establish the presence or confirm the absence of associated anomalies. This is best done with the patient in the RAO position (Marder and Scott) while the valvular stenosis is best demonstrated in the LAO position.

The surgical approach for infundibular stenosis is quite different from the one advocated for valvular stenosis. Hence, the accurate demonstration of the narrowed segment is of paramount importance. Angio-

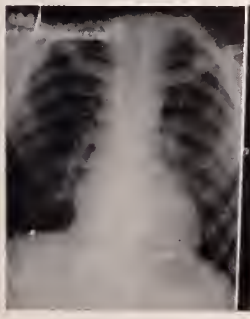

Fig. 3 A

Fig. 3 B

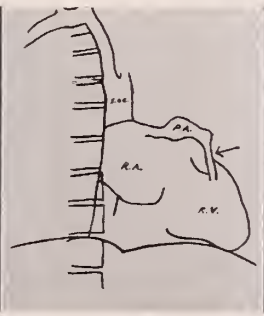

Fig. 3 C

Fig. 3 D

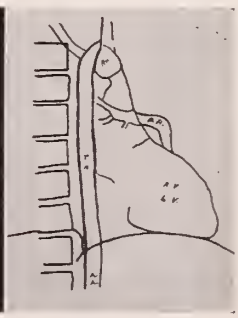

Fig. 3 E

cardiography, in association with cardiac catheterization has proven to be an important adjunct towards achieving this purpose. Brock has advocated a new technique for the correction of the infundibular stenosis, consisting of a dilatation of the narrowed segment by a direct approach. The majority of the cardiac surgeons still concur to the Blalock-Taussig operation or to the Potts-Smith operation, and we shall discuss it briefly in the following chapter.

Case Report. Case II: J.W. #190-648.

A four-year old white male had spells of cyanosis since birth and repeated upper respiratory infections. A grade III to IV systolic murmur was heard over the entire precordium with the maximum intensity over the second right intercostal space. EKG: suggestive of right ventricular hypertrophy. Roentgenogram of the chest (Fig. 2, A) revealed a cardiac silhouette within normal limits. There was a concavity at the site of the pulmonary artery segment and diminished vascularity of the lung periphery. Angiocardiogram (Fig. 2, B and 2, C) was performed in the right anterior oblique position and a narrow infundibulum of the pulmonary conus was demonstrated with an enlargement of the right ventricle. Cardiac catheterization revealed hypertension of the right ventricle and possible high inter-ventricular septal defect. The patient was operated and a Blalock-Taussig anastomosis between the left subclavian artery and the pulmonary artery was established in order to relieve the infundibular stenosis. The patient was seen eight months later. with marked clinical improvement.

Tetralogy of Fallot

Tetralogy of Fallot is a congenital heart disease of the cyanotic type. It consists of: 1. Stenosis of the pulmonary artery, 2. Interventricular septal defect, 3. Dextroposition of the aorta (overriding), and, 4. Hypertrophy of the right ventricle. A wide range of variation exists. The variables depend on the degree and on the type of pulmonary stenosis, on the situation of the interventricular septal defect, and on the alterations in the course of the aorta. Most often, the pulmonary conus of the right ventricle is small and hypo-plastic, the infundibulum is narrow, and the initial segment of the pulmonary artery is also hypoplastic. The pulmonary circulation is maintained either via a patent ductus arteriosus, or via collateral bronchial arteries, or both. The degree of dextroposition of the aorta likewise varies greatly. It may range from slight overriding to complete transposition of the great vessels, the aorta arising from the right ventricle and the pulmonary artery from the left ventricle. The hypertrophy of the right ventricle is merely the result of the combined effects of pulmonary artery stenosis, obstruction in the pulmonary circulation, and the shunt of blood flow. It does not constitute a congenital anomaly by itself.

Cyanosis exists from infancy and increases with age. The cyanosis is due to the venous arterial shunt into a dextroposed aorta. It depends mostly on the amount of blood reaching the lungs for oxygenation, as demonstrated by the work of Taussig and Blalock in 1947. These two factors obviously will be influenced by the degree of pulmonary stenosis, and hence the variation in the degree of cyanosis. Cyanosis may be observed late and only during some intercurrent illnesses. As cyanosis develops, clubbing of the fingers appears and it is proportional to the degree of cyanosis. Dyspnea likewise appears to be proportional to the severity of the anatomical defect. Helen Taussig observes that a child with tetralogy, when exhausted by exertion, assumes a squatting position. This has been observed in 75 per cent of the cases and no explanation is as yet available for the underlying mechanism of this phenomenon.

Epileptiform attacks are observed often in children with tetralogy of Fallot. Abbott considers that these attacks are due to combined effects of anoxemia and polycythemia, which might cause small areas of capillary thrombosis in the brain. Dextroposition of the aorta certainly favors the occurence of paradoxical embolism.

Polycythemia is a frequent phenomenon resulting from an effort to increase the oxygen-carrying capacity of the blood. Epistaxis, hemoptysis, and even hematemesis are commonly observed.

Enlargement of the heart is rather the exception than the rule. When present, it involves only the right ventricle. Many cases

show a smaller heart than normal. A systolic thrill may be present with the maximum intensity in the pulmonic area. A systolic murmur is present in a least 90 per cent of patients and it is most pronounced in the second and third left interspaces. However, the auscultatory findings are not pathognomonic.

Electrocardiogram shows right axis deviation of moderate or marked degree. Roengenogram of the chest quite often exhibits characteristic features, however by no means pathognomonic. Many cases show a cardiac silhouette of the "coeur-en-sabot" type, an abnormal projection of the aorta to the right, and a notable concavity at the site of the pulmonary artery segment. The apex is blunt and raised.

The upper mediastinal shadow may be quite narrow. Fluoroscopic examination in the LAO position shows a large pulmonary window and hypertrophy of the right ventricle. In the RAO position, the concavity of the pulmonary artery may become quite obvious. The hilar pulsations may be diminished or absent. The peripheral lung markings may be scant. Pulmonary congestion tends to exclude a diagnosis of tetrology.

Angiocardiography is of great value in tetralogy of Fallot. The type of pulmonary artery stenosis may be demonstrated. There is usually some delay in the filling of the pulmonary artery and a variation in the opacification dependent upon the severity of the stenosis. A shunt from right to left fills the dextroposed aorta within one-half seconds after the injection. The more equal the density of the contrast substance in the aorta and the right ventricle, the greater is the degree of the dextroposition or the transposition (Dotter and Steinberg). The scarcity of peripheral vascular markings may likewise be demonstrated.

Surgical correction so far as has been directed toward the improvement of the pulmonary circulation. The Blalock-Taussig operation consists of establishing an anastomosis between the side of the pulmonary artery and the left subclavian artery. Sometimes the carotid or innominate artery is used.

The Potts-Smith operation is a direct side to side anastomosis between the pulmonary artery and the aorta. Both operations intend to furnish more adequate blood to the pulmonary circulation. For further details the reader is referred to the original papers.

Although the congenital abnormalities still remain with the patient, the immediate effects of the operation are a great clinical improvement. Contra-indications to the operation are believed to be few: gross disturbance of conduction, evidence of bacterial endocarditis, renal disease, or recent cerebral accidents.

Case Report. Case III: D.A.R. #199-886.

A nine year old white male had been cyanotic since birth and showed a marked retardation in growth and development. In addition, he had several episodes of syncope. Examination revealed a grade III systolic murmur best heard over the second left intercostal space and at the apex. This patient likewise showed clubbing of the fingers and toes. Hemoglobin: 18.5 gms. per cent. EKG revealed a right ventricular and a right auricular hypertrophy. Roentgenogram of the chest (Figure 3A) revealed a slightly enlarged cardiac silhouette with a concavity at the site of the pulmonary artery segment. Fluoroscopy revealed right ventricular hypertrophy. The appearance of the cardiac silhouette suggested a "coeur-en-sabot." Angiocardiogram was performed in the right anterior oblique position (Figures 3B and 3C) and showed an infundibular stenosis of the pulmonary artery. The aorta was densely opacified 1.5 seconds after the injection (Figures 3D and 3E), and situated anteriorly to the pulmonary artery, thus indicating a moderate degree of overriding and the presence of an interventricular septal defect. Cardiac catheterization showed right ventricular hypertension and a high inter-ventricular septal defect. An operation was performed and a Blalock-Taussig type of anastomosis between the left sub-clavian artery and pulmonary artery was established. When the patient was last seen, 10 months after the operation, his condition was markedly improved.

Interatrial Septal Defect

Interatrial septal defects constitute the most common of all congenital malformations of the heart. There are several types of interatrial septal defects. The more important are: (1) patent foramen ovale, (2)

persistent ostium primum, and (3) persistent ostium secundum. Blood may pass from one atrium to the other through this defect, the direction and the amount of shunt depending upon the difference in the pressure in the two chambers. Normally, the pressure in the left atrium is higher than that in the right, and blood will be shunted from left to right. This will markedly increase the amount of blood flow through the pulmonary circulation. Consequently, a greater load is put on the right ventricle. It hypertrophies and enlarges, the pulmonary vessels become enlarged and engorged. The left atrium, the left ventricle, and the aorta are normal or rather small in comparison with the right chambers and the dilated pulmonary artery.

The uncomplicated cases of interatrial septal defects may be entirely asymtomatic. Dyspnea is usually present and may be so habitual that the patient is not complaining of shortness of breath. It may manifest itself for the first time in the second or third decade. Cyanosis is inconstant and only noticable on exertion. It may become intense in failure. The cyanosis is due to a reversal of the shunt. These patients are otherwise pale and retarded in development.

Auscultation of the heart may reveal a systolic murmur at the apex or in the pulmonary area. However, in many cases, there is no murmur at all. The pulmonary second sound is accentuated, and a systolic thrill may be palpable at the same time.

Roentgenogram of the chest reveals an enlargement of the pulmonary artery segment and an enlargement of the cardiac silhouette. The pulmonary artery and its branches are enlarged and fluoroscopic examination reveals increased pulsation of these vessels at the hila, the socalled "hilar dance."

Electrocardiogram shows right axis deviation and a right bundle branch block. Auricular fibrillation occurs with some frequency.

Angiocardiography often reveals the fundamental hemodynamic abnormality. There is persistent opacification of the right atrium and a dilated right ventricle. Sometimes early opacification of the left auricle and simultaneous opacification of the right atrium can be demonstrated, thus indicating a shunt from right to left. The left ventricle and aorta are usually poorly outlined as to be expected.

Cardiac catheterization surpasses angiocardiography in the demonstration of interatrial septal defects. It reveals that the oxygen content of the blood in the right auricle is appreciably higher than of the blood from the superior or inferior vena cava.

Attempts to repair interatrial septal defects have been promising in the last few years and many patients all over the country have been successfully operated upon. Recent advances in anesthesia with the patient in a state of hibernation may open a new field for cardiac surgery.

Case Report. Case IV: A.D. #191-984.

A six-year old white female had a history of difficulty in breathing since the age of one. She also had frequent upper respiratory infections and was twice hospitalized for cardiac failure. The patient was well developed and well nourished. There was mild cyanosis of the extremities. Blood pressure: 112/68, pulse, 106/min. A loud, harsh, grade IV systolic murmur was heard at the second, third, and fourth interspaces on the left side, and transmitted to the back. Blood pressure and other laboratory tests were within normal limits. The electrocardiogram suggested a right and left ventricular hypertrophy as well as sinus tachycardia.

Roentgenogram of the chest (Figure 4A) revealed an enlargement of the cardiac silhouette with a prominent pulmonary artery segment and increased hilar vascular markings. Fluoroscopic examination revealed a moderate enlargement of the right ventricle and a "hilar dance."

Angiocardiography in the AP position confirmed the presence of the right ventricular enlargement, and the dilatation of the pulmonary artery segment (Figures 4B and 4C). In addition, it revealed reopacification of the right atrium and pulmonary vessels (Figures 4D and 4E) after opacification of the aorta, highly suggestion of interatrial septal defect.

Cardiac catheterization was carried out, and the findings were inconclusively mostly due to technical difficulties. The child has been followed in the pediatric clinic and surgical repair of the defect may eventually be considered.

Fig. 4 A

Fig. 4 B

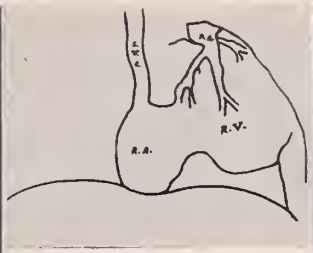

Fig. 4 C

Fig. 4 D

Fig. 4 E

Patent Ductus Arteriosus

A persistent patent ductus arteriosus allows a shunt of blood from the aorta to the pulmonary artery, the pressure normally being greater in the left side of the heart than that in the right side. A large shunt results in a low diastolic pressure and is not only a cause of increased work by the left ventricle, but also puts a greater load on the work of the right ventricle. The pulmonary artery and its branches become dilated. The children with a patent ductus arteriosus, particularly those with a large shunt, are pale and underdeveloped. Cyanosis is absent at rest, but it may appear on exertion. In certain rare cases of long duration, the pulmonary pressure may increase to such a degree that it is equaled or exceeds the aortic pressure, thus reversing the direction of the shunt in the patent ductus and giving rise to late cyanosis of "cyanose tardive."

Symptoms are occasionally present and are usually those of dyspnea on exertion, and easy fatigability. A characteristic machinery or continuous murmur is best heard in the second left interspace close to the sternum and is usually diagnostic of a patent ductus. However, many cases do not present the typical murmur, particularly children under the age of three. Undoubtedly, a patent ductus may be present in the absence of a machinery murmur. The pulse pressure is often increased, the diastolic pressure being lower than normal.

The electrocardiogram is usually within normal limits. There may be a tendency to left axis deviation if the shunt is large. Roentgenograms reveal only slight enlargement of the cardiac silhouette and fluoroscopy demonstrates biventricular cardiac enlargement as well as an enlargement and an expansile pulsation of the pulmonary arteries.

Angiocardiography may give additional evidence but is rarely indicated in the presence of a typical clinical picture. It may exclude or confirm the presence of a suspected associated malformation. A dilatation of the aorta distal to the origin of the left subclavian artery may be suspicious of a patent ductus. (Steinberg, Grishman, Dotter, Sussman). Angiocardiography may show the enlargement of the pulmonary artery and an elevation of its left main branch. A disturbance in the hemodynamics may be presumptive of a diagnosis of a patent ductus arteriosus. The left pulmonary artery and its branches may be reopacified at the time of the opacification of the aorta, denoting a shunt between the aorta and pulmonary artery. Retrograde aortography will occasionally demonstrate the patent ductus.

Surgical correction consists of ligation of the patent ductus arteriosus. The diastolic pressure rises, the pulse pressure becomes normal, the size of the heart diminishes, and the murmur disappears. If operated at an early age, the tendency to underdevelopment

Fig. 5 A

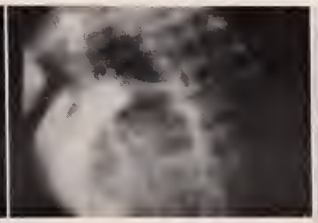

Fig. 5 B

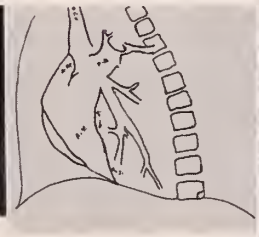

Fig. 5 C

Fig. 5 D

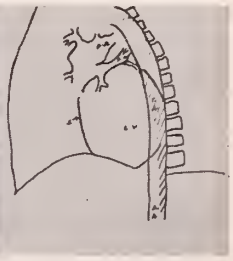

Fig. 5 E

may be checked. It certainly tends to prevent the occurrence of congestive failure and diminishes the risks of infectious endocarditis, a quite common accompaniment of a patent ductus arteriosus.

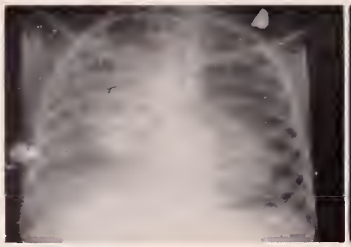

Fig. 6 A

Fig. 6 B

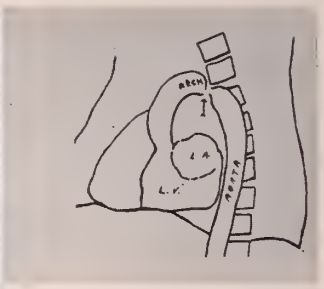

Fig. 6 C

Case Report. Case V: K.S.H. #189-472. A three-year old white female had frequent upper respiratory infections, easy fatigability and a slow development. There was no cyanosis. A continuous grade IV murmur was heard over the first and second intercostal spaces. A grade II systolic murmur was heard over the apex. EKG showed a suggestion of left ventricular hypertrophy. Roentgenogram of the chest (Figure 5A) revealed a slight enlargement of the cardiac silhouette with a straightening of the left ventricular border suggestion of left ventricular enlargement. There was increased vascularity of the lungs. Fluoroscopy confirmed the above mentioned findings. Angiocardiogram in the LAO position (Figures 5B, 5C, 5D, and 5E) revealed a persistent reopacification of the left atrium and left ventricle, and reopacification of the branches of the pulmonary arteries, indicating a shunt between the aorta and the pulmonary artery (patent ductus arteriosus). The patient was operated on and the patent ductus was ligated. The patient was seen 15 months after the operation and showed a satisfactory progressive course and clinical improvement.

Coarctation of the Aorta

Coarctation of the aorta is a congenital narrowing of the arch of the aorta. Two types are commonly distinguished: (1) The "infantile type," in which the narrowing is at a site proximal to the left subclavian artery. Blood supply to the lower extremities and trunk usually occurs via a patent ductus arteriosus. Hence, there is a selective cyanosis of the lower extremities and trunk. Patients with this type of coarctation usually do not survive infancy. (2) The "adult type," where the stenosis is distal to the origin of the subclavian artery, and at, or adjacent to, the site of insertion of the ductus arteriosus.

Coarctation of the aorta may be entirely latent and unsuspected during life. However, the great majority of the patients sooner or later do develop a typical clinical picture.

Symptoms are uncommon in childhood. These may consist of recurrent epistaxis, exertional dyspnea, and very occasionally subarachnoid hemorrhage. Symptoms most often appear in early adult life: palpitation, dyspnea, headaches, tinnitus, pulsations in the neck, head nodding with systole, etc. These phenomena are the results of a hypertension in the upper parts of the body. The lower extremities are cold, numb, and pale, as a result of diminished vascular supply. There is hypertension in the upper extremities and hypotension or unobtainable blood pressure in the legs. The femoral pulse is absent or hardly perceptible. Uncomplicated cases of coarctation of the aorta do not show cyanosis.

The heart may be normal in size or slightly enlarged. A systolic murmur may be heard, loudest at the base of the heart. The murmur is heard over the back, particularly well over the scapulary vessels. Electrocardiogram usually shows left ventricular hypertrophy.

Roentgenogram of the chest may substantially supplement the clinical findings. Notching on the inferior surfaces of the posterior extremities of the third to the ninth ribs is commonly observed. The notching is due to pressure atrophy by dilated tortuous intercostal vessels as a result of an increased collateral circulation. The cardiac silhouette may show slight enlargement with an accentuation of the left ventricular border.

Angiocardiography is of paramount importance in coarctation of the aorta. It usually demonstrates the actual site and the extent of the coarctated segment. The ascending aorta is usually dilated while the transverse arch appears somewhat narrowed and elongated. The left subclavian artery is usually dilated, and the coartation is distal to its origin. The aorta distally to the coarctation quite often shows a bulging comparable with the "post-stenotic dilatation" of the pulmonary artery seen in isolated pulmonary valvular stenosis.

Occasionally, angiocardiography may fail to demonstrate the site of the coarctation, and retrograde aortography may be applied. This method offers more detailed information and better visualization of the aorta and its branches. It consists of an injection of the same contrast medium, however, in a lesser concentration (Urokon-Sodium 30 per cent), into the brachial or common carotid artery in a retrograde manner. This diagnostic procedure is more elaborate and should only be applied when direct angiocardiography fails to demonstrate the coarctation.

Surgical correction aims toward an excision of the narrowed segment and an establishment of an end to end anastomosis (Gross).

The results of the operation are impressive. The pressure in the upper extremities falls, and rises in the legs. The collateral vessels decrease in size gradually, and the risks of infectious endocarditis are greatly diminished.

Case Report. Case VI: M.L.R. #198-090.

A four-year old colored female showed a severe degree of anaemia and marked underdevelopment. The patient had recurrent episodes of epistaxis. The blood pressure was 156/70 in the left arm, and 162/70 in the right arm. The blood pressure in the legs was unobtainable. A gallop rhythm and a systolic murmur were heard over the entire precordium with the maximum intensity over the third intercostal space. Hemoglobin was 3.0 mgs. per cent. EKG showed a partial heart block. Roentgenogram of the chest (Figure 6A) revealed an enlargement of the cardiac silhouette. The right para-mediastinal shadow probably represents an enlarged right lobe of the thymus. Angiocardiogram in extreme left anterior oblique position (Figures 6B and 6C) revealed an interruption in the outline of the aorta immediately distally to the left subclavian artery, denoting the coarctation of the aorta.

Case Report. Case VII: D.R.P. #174-730.

A four and one-half-year old white male with congenital hypospadia and stenosis of the urinary meatus, was suffering from frequent upper repiratory infections and easy fatigability. No cyanosis was present. The blood pressure in the arms was 130/84. The femoral pulses were weak, the popliteal and the dorsalis pedis pulses could not be obtained. The blood pressure in the legs was not obtainable. A grade III soft blowing systolic murmur was heard over the entire precordium with the maximum intensity over the aortic and pulmonary areas. EKG revealed a partial heart block. Roentgenogram of the chest (Figure 7A) revealed a slight enlargement of the cardiac silhouette. There was widening of the superior mediastinum and an increased vascularity in the hilar areas. An angiocardiogram was performed in the AP position (Figures 7B and 7C) and a double superior vena cava was outlined, the right one opening into the right auricle, the left one opening into the left auricle. The coarctation of the aorta was not demonstrated at this time.

A retrograde aortogram was performed. The contrast medium was injected into the left brachial artery. The aorta and its

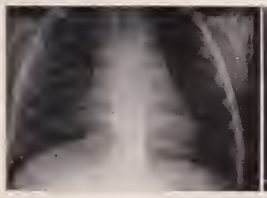

Fig. 7 A

Fig. 7 B

Fig. 7 C

Fig. 7 D

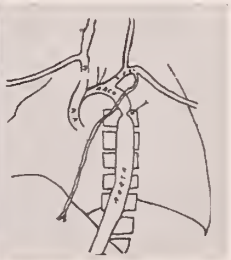

Fig. 7 E

branches were well demonstrated (Figures 7D and 7E) and the coarctation of the aorta, distal to the left subclavian artery was outlined.

Summary

Angiocardiography has become an essential part of the standard clinical investigative procedures of cardio-vascular diseases. This method has been extremely valuable in the determination of congenital malformations of the heart. Accumulated experience has indicated the values as well as the shortcomings and limitations of this diagnostic method. The interpretation of angiocardiograms has to be correlated closely with the clinical picture and with all other available methods, in particular with cardiac catheterization. These two methods, angiocardiography and cardiac catheterization, supplement each other and ought to be applied in all suspected cases in order to gain supplementary information, in order to visualize the suspected defect, and, in order to demonstrate associated defects that might not have been suspected by other investigative methods.

Discussion of congenital malformations of the heart is no longer an academic problem. A great number of these patients can be helped by cardiac surgery, and an accurate pre-operative diagnosis is of paramount importance.

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Medical Grand Rounds

INFLUENZA *and* FLU

STEWART WOLF, M.D.

Stewart Wolf M.D.: Today we are considering a very timely subject. A good many of our staff and their families have been laid up with self-limiting illnesses variously called flu, virus, a bad cold or intestinal flu. Doctor Robert Bird will tell us of the first patient.

Robert Bird M.D.: The first case is that of a 30-year-old resident physician who was taken acutely ill September 22, 1954. His past history was unremarkable. On September 22 he had a mild diarrhea which lasted during the morning and was unassociated with much abdominal distress. For the remainder of the day he worked and felt essentially well. Late that evening he was awakened twice with shaking chills. On arising on the morning of the 23rd, his temperature was 101.4. He had a generalized headache, severe lower dorsal and lumbar backache, and anorexia. During the day of the 23rd he continued on duty though feeling very much below par. On September 24 he had less fever and less diarrhea but headache was more intense and in addition he had pains in the knees and other large joints. He had taken no medications except aspirin. On the 24th his physical examination was entirely unremarkable except for slight fever and moderate photophobia. The fundi, ears, nose and pharynx were all clear. There was no generalized or localized lymphadenopathy. Examination of the heart and lungs and abdomen were all within the limits of normal. A white count was 12,700 with a differential of 73 per cent adult polys, 5 per cent bands, 11 per cent lymphocytes, 8 per per cent monocytes, and three per cent eosinophiles. Symptomatic therapy was continued. By the 27th the patient felt entirely

well and was back at work on a full schedule. One week after the onset of the illness, there was a relapse of malaise, aching of the back muscles and joints, and diarrhea which lasted for one day. The patient was not examined at this time. Subsequently he has been entirely well.

This history is fairly representative of a significant number of the hospital staff who during recent weeks have been similarly ill. Some of the patients have shown more respiratory symptoms, manifested by lacrimation, suffusion of the conjunctivae, and a great deal of coughing, sneezing and rhinorrhea. Still other individuals have shown more headache and quite a few have developed actual nuchal rigidity. A marked somnolence in some patients has been out of proportion to the degree of fever or other evidence of disability.

Ted Clemens M.D.: This is the case history of a 29 year old licensed practical nurse who noted lacrimation, rhinorrhea and conjunctivitis followed in four-six hours by mild stiffness of the neck, chills, and fever. The next day she had six-eight loose green bowel movements, general malaise, myalgia, and her neck remained stiff. Symptomatic therapy was instituted, but on the third day of her illness she noted a shaking chill followed by a fever of 104 degrees, many loose stools, generalized throbbing headache, and continuation of the earlier symptoms. She was seen in the Emergency Room where physical examination revealed her to be acutely ill with temperature of 101 degrees. There was marked lacrimation, photophobia, and moderate conjunctivitis. The pharynx was diffusely injected. Flexion of the neck was painful. Urinalysis was normal and there was a moderate leukocytosis with shift to the left. Cerebrospinal fluid examination revealed 30 mg. per cent protein, no cells, normal sugar and chlorides. Culture of the cerebrospinal fluid was sterile. Chext x-ray was normal. She was treated symptomatically with salicylates, codeine, phenobarbital, and kaopectate for the diarrhea. Temperature was normal on the second day after admission, although neck stiffness and headache persisted. By the third hospital day she was asymptomatic. She was discharged asymptomatic after five days of hospitalization and returned to work three days later. Serum drawn during the illness and sent to the State Health laboratory for complement fixation test for viral infections revealed positive titers of 1:16 for influenza type A, PR8 strain. Complement fixation for other viral infections was negative save for 1:16 titer to the mumps antigen.[1]

Mark Johnson M.D.: The third patient is a 22-year-old male medical student who was well until 2 a.m., October 12, 1954, at which time he awoke from a sound sleep suffering with a generalized headache. Upon arising he experienced profound nausea and during the ensuing 12 hours he vomited 7 or 8 times. The vomitus gradually changed in content from undigested food matter to small quantities of mucoid material, sometimes flecked with blood. Frequent bowel movements marked the early onset of symptoms, so that initially the picture was that of an acute gastroenteritis. He was seen in the Health Service Clinic on the afternoon of October 12, 1954, where he was found to have a temperature elevation to 100 degrees Fahrenheit, a moderately injected pharynx, slight diffuse upper abdominal tenderness, and increased peristaltic sounds over the abdomen. He was given emetrol and was advised to return home to bed rest and to employ simple supportive measures. Although the diffuse headache and generalized malaise persisted, the symptoms of gastrointestinal disturbance subsided for approximately 30 hours, until the evening of October 13, 1954, when the nausea and vomiting returned. This time it was accompanied by a generalized myalgia, a persistent chilly sensation, increased severity of the headache, and a sensation described as "giddiness and light-headedness". He began to feel feverish for the first time and the patient spent a generally restless night prior to his return to the hospital and subsequent admission on the morning of October 14, 1954.

The past history contained no pertinent points and a careful attempt to establish a cause for gastroenteritis was unrewarding.

Physical examination disclosed a young white male who appeared to be acutely ill and slightly obtunded; however, he was well oriented and cooperative. The oral tempera-

1. Serum from the second patient drawn 4 weeks after the initial specimen showed complement fixation titers of 1:64 for both the FM1 and PR8 strains of type A influenza and 1:16 for Type B, Lee strain.

ture was 103.6, pulse rate 120, respirations 20, BP 160-80. Both ear drums showed linear streaks of hyperemia. The conjunctivae and corneae were slightly suffused. The nasal mucosa was dry and reddened. A mild malar flush was apparent on the face and associated with perioral pallor, dry lips, and an offensive breath. Mucosa of the posterior pharynx and soft palate was lightly reddened and somewhat edematous. No significant lymphadenopathy were present. There was a moderate degree of generalized abdominal tenderness but bowel sounds were normal. Superficial and deep reflexes were normal. There was no nuchal rigidity, and the Kernig and Brudzinski signs were not present. Admission laboratory studies revealed the urine to be normal and the white blood count to be 18,600 with 79 per cent neutrophils, 16 per cent lymphocytes, and five per cent monocytes. The admission diagnosis was viral infection, type undetermined. The patient was placed at bed rest and was given parenteral fluids and aspirin compound tablets for symptomatic relief. On the day following admission, a moderate degree of confusion and disorientation was apparent and definite nuchal rigidity had appeared. Fever remained high. Cerebrospinal fluid contained 110 white blood cells, all of which were lymphocytes, and 50 mg. per cent of protein. The spinal fluid was negative for organisms by smear and subsequently by culture, and blood cultures were negative. Symptomatic therapy was continued and by the fourth hospital day the patient showed definite improvement. He was discharged to resume classes after nine days of hospitalization. Complement fixation titers on serum drawn during the acute stage of his illness were 1:8 for influenza type A, strains FM1 and PR8, and for type B, Lee strain. There was a 1:16 titer for mumps. Tests were negative for lymphocytic choriomeningitis, the equine encephalomyelitides, St. Louis encephalitis, and Q fever.

Clair Liebrand M.D.: This 22-year-old white male was referred from one of the state corrective institutions on October 7, 1954, with the referring diagnosis of meningitis. According to available history, he was noted to be listless by his fellow inmates for a period of approximately one week prior to his admission to University Hospital. Two days prior to admission he reported to sick bay at the reformatory complaining of severe headache. Because of a stiff neck, a diagnosis of early meningitis was made and the patient was started on sulfadiazine, penicillin, streptomycin and achromycin. Two days later, due to persistent symptoms and progressive stupor, a lumbar puncture was done and was said to show 300 white blood cells, type not stated, and gram positive cocci on smear. The patient was referred to University Hospital where examination in the Emergency Room revealed a comatose, dehydrated white male whose fever was 108.7°. Pulse was 120, respirations 36 and Cheyne-Stokes, and blood pressure 115-50. There were defisite signs of meningeal irritation. The upper respiratory tract, the heart, lungs, abdomen and the lymphatic system were unremarkable. The patient was sent immediately to the ward with the diagnosis of acute meningitis.

Physical examination upon arrival on the ward was unchanged save for lowering of the body temperature to 105°. A lumbar puncture was done immediately and yielded slightly opalescent fluid under normal pressure. Cell count on the fluid revealed 165 white blood cells, of which 13 were adult neutrophils and 152 lymphs. Protein was 75 mg. per cent and sugar 78 mg. per cent. No organisms were seen on smears, nor were torula demonstrable in India ink preparations. The urinalysis was normal save for a trace of protein. White blood count on admission was 12,500 with 43 per cent polys, 48 per cent lymphocytes, seven percent monocytes, one per cent eosinophils, and one per cent basophils. Serum electrolytes were normal. Nasopharyngeal culture revealed hemolytic staphylococcus aureus, and blood cultures were negative, as were all cerebrospinal fluid cultures. The patient was treated with parenteral fluids and other supportive measures, and because the gram positive cocci reported in the spinal fluid smear prior to admission, he was continued on penicillin, 1,000,000 units every two hours, and intravenous sulfadiazine. In spite of ther-

2. Convalescent titers for the third patient were 1:16 for influenza type A, strains FM1 and PR8, and for type B, Lee strain. The titer to mumps also was reported as increased to 1:32, exemplifying the importance of significant rises rather than merely changing titers.

apy his course was progressively downhill, although his fever gradually diminished. Daily lumbar taps revealed no significant change from the initial spinal fluid findings. On the fifth hospital day while being turned to his side for spinal puncture, he became cyanotic and a tracheotomy was necessary. Subsequent to this his respirations became progressively more labored, and he expired October 12, 1954. Autopsy revealed an edematous, congested, inflamed brain with cerebellar pressure cone. In addition severe purulent tracheobronchitis, petechial and ecchymotic hemorrhages of the gastrointestinal mucosa, moderate congestion of the viscera, and moderate parenchymatous degeration of the heart, liver and kidneys were present. Subsequent to death, reports on serum sent to the State laboratory were negative for lymphocytic choriomeningitis, eastern and western equine encephalitis, St. Louis encephalitis, mumps, and Q fever. Complement fixations for influenza were not done on this specimen. Serum drawn on the day of death showed a titer of 1:4 for lymphocytic choriomeningitis; and for the influenza viruses, 1:16 for type A FM1 strain; 1:8 for type A PR8 strain; and negative for B, Lee strain.[3]

Doctor Wolf: We have heard four patients presented to us with symptomatology and findings on physical examination and laboratory studies which we are inclined to call influenza or "flu". It is striking that in this group of conditions we do not see a stereotyped picture, but rather a variety of symptoms including headache, rhinorrhea, sore throat, cough, aches and pains throughout the entire body, fever, diarrhea, nausea, and vomiting. Fever and aching may be the first symptoms or symptoms suggestive of the common cold. Another patient may wake up suddenly with nausea and vomiting, while symptoms in some patients may be limited to diarrhea. Certainly we are not seeing a clear-cut, single syndrome. Some patients in the current outbreak have noted heartburn, epigastric pain, or symptoms of cardiospasm. Also striking is the frequency with which leukocytosis was reported and how frequently we have seen such symptoms as stiff neck, insomnia, disorientation, etc. These cases give rise to a number of questions: In particular, we are dealing with one disease only? Is this picture due to a single virus which manifests itself differently in different individuals? Is there a predictable difference in the clinical picture of different strains of virus? How reliable are our diagnostic tools, and how do we interpret them? We also are interested in the questions of immunization and therapy. Are vaccines of any value? What do antibiotics accomplish? Doctor Scott, would you open the discussion and tell us something about the viruses which cause symptoms such as these, especially the influenza viruses?

Vernon Scott Sc.D.: There are three totally unrelated immunological types of influenza virus that produce the same symptomatology in man. The first is type A and is comprised of many strains. Type A influenza was first isolated by Smith, Laidlaw, and Andrewes in 1933. In 1934 Francis isolated the PR8 strain of influenza which is the classical type A known here in the United States. There have been several A strains isolated since 1934, but the PR 8 has the broadest antigenic base of any of the type A influenza viruses isolated so far. Now in 1947 there was a new type A virus going around which differed from the A virus isolated heretofore, but it was immunologically related to the A type and was, therefore, designated as A'. Every year since 1947 there has been at least one and sometimes several new A' strains isolated in the United States. The second type of influenza virus, the type B, includes the Lee strain virus which was the first of the strains isolated (1940) and has the broadest antigenic base of any of the B types. Since that time many

3. Histological study of the brain was described by Dr. Walter Joel as follows:

Slides from the hypothalamus show extensive lymphocytic cuffing of the blood vessels. Areas of ring bleeding are seen in the Virchow-Robin spaces. There are many areas of demyelinized tissue, especially around vessels, and some areas not related to vessels show proliferation of oligodendroglia and lymphocytes.

In the pons there are perivascular infiltrations as previously described, although degenerative changes are less marked. Some areas show degeneration of the ganglion cells with cytolytosis; some ganglia show only cytoplasm without nuclei; and some present clumping of the Nissel substance. The distribution of major involvement in the pons is in the pedunculi and tegmentum.

The cerebellum and cerebral cortex show centers of degeneration and cuffing as described elsewhere, though less marked. The cortical and pial vessels are dilated and filled with blood, and the meninges show increased numbers of lymphocytes.

The picture is typical of encephalitis, and compatible with St. Louis or eastern equine encephalitis, though in the latter cyst formation is often prominent. It is impossible to make a type diagnosis from the histological picture.

type B strains have been isolated, and all of the B strains are immunologically related. All the A strains are similarly immunologically related, but the A strains are not related immunologically to the B strains. In 1949 Dr. R. M. Taylor of the Rockefeller Institute isolated a new type of influenza virus known as the C virus, and since that time this virus has been isolated by several workers and has been shown to be widespread. It is immunologically distinct from the A and B types of influenza virus.

Dr. Wolf asked if there was a difference in the diseases which these viruses produce. Clinically one cannot distinguish between the disease patterns produced by type A or type B. In general the disease produced by the A influenza virus is more severe than the disease produced by the type B virus but both types may produce diseases ranging from severe illness down to subclinical cases. Immunological procedures have demonstrated that such subclinical cases of influenza do occur. The information on type C viruses is still limited, but they appear mainly to produce low grade infections with predominantly upper respiratory symptoms.

How does one make the laboratory diagnosis of influenza? The etiologic diagnosis can be made in two ways. One way is the isolation of the virus and its subsequent identification. The virus is isolated from nasal washings or throat gargle specimens taken during the first 24 to 48 hours of the disease. (The sooner the specimen is taken, the more likely one is to isolate the virus.) These specimens are mixed with suitable antibiotics, such as penicillin and streptomycin, and inoculated into the amniotic cavity of the developing chick embryo. After a suitable incubation period the viruses are harvested and their presence is detected by their ability to agglutinate the erythrocytes of humans, guinea pigs, or chickens. After the virus has been isolated, it is identified using immunological procedures with known immune sera. The immunological procedure usually used is the hemagglutination inhibition test; however, there are others that are useful, namely the complement fixation test, the in vivo neutralization test, and the protection tests. The second method for the laboratory diagnosis of influenza is the use of immunological procedures employing acute and convalescent sera. It is very important that paired sera be obtained. I know of no laboratory that will make a diagnosis of influenza on a single serum specimen. Not only is it important that both acute and convalescent serum be used, but there must be a four-fold rise in antibody titer between the titers of the two specimens before it is diagnostic. The reason one cannot give a diagnosis on one specimen alone is that everyone five years old or older has at some time had influenza, and Rickard in 1941 and many others since then have shown that everybody has a residual influenza antibody titer. This residual titer often may range as high as 64 and occasionally to 256, and therefore the single titer is not diagnostic. A four-fold increase is needed to differentiate the residual from the newly acquired titer. The acute serum specimen should be taken at the onset of the disease when the patient first comes to the doctor. The second serum specimen should not be taken before a two week interval has elapsed. It has been shown by many workers that the antibodies to influenza begin to appear around the tenth day and reach their peak titer around the fourth to the sixth week, remain steady for a short time, and then begin to wane. A person then who has had an attack may be susceptible again within eight months or a year because of the loss of protective antibodies. I can't emphasize too much the value of paired specimens (acute and convalescent serum) in the serological diagnosis of influenza or any other viral infection. Laboratories should not do immunological tests on one serum specimen; the information obtained is valueless.

Now as to Doctor Wolf's question regarding vaccination. There is a vaccine for the prevention of the disease influenza. The biological houses put out a vaccine every year which is effective against the viruses that are included in that vaccine. The main trouble with the vaccine is that it may not contain the strain of influenza virus that is prevalent in the expected epidemic. For instance, in 1944 the vaccine which was used protected against the current influenza epidemic. In 1946 the vaccine protected against

the type B influenza outbreak, but in 1947 people might just as well not have been vaccinated because it was that year that the A' strain, FM1, appeared, and since that time many mutants of the A' strain have been appearing. This pesky influenza virus is probably the worst of all the viruses known to man from the standpoint of mutation. What biological houses try to do each year is to include the broadest antigenic virus of the A type and the B type and one or two of the viruses that were prevalent the last season. You can see the difficulties involved. The vaccine may not contain the proper antigens to stimulate the host to produce protective antibodies. It must be given at least two weeks prior to exposure since it takes at least ten days for demonstrable antibodies to be developed. The influenza vaccine is made from the allantoic fluid of the chick embryo, is concentrated and partially purified, then inactivated by chemicals or ultraviolet light. If the vaccine used includes antigens of the particular strain which comes along and is given far enough in advance of exposure, then temporary protection is achieved. This probably is effective for only about three months but that is enough to get one through the winter.

Epidemics of influenza are always interesting. Outbreaks of influenza A seem to go in cycles of two or three years, while the disease produced by the type B viruses seems to go in cycles of four to five years. Great pandemics, world-wide in extent, sweep the world at intervals of 20 years or more. Between pandemics the disease is universally endemic, and from time to time localized epidemics occur. They start from a definite geographic focus and spread rapidly. A localized epidemic lasts only three to six weeks, is less severe than pandemic influenza, and has a lower attack rate. When a pandemic occurs, it is composed of three distinct waves separated by months or a year. There is an outbreak in progress somewhere in the world all the time. We know that the highest percentage of cases is usually in the winter or early spring, although there may be some cases in the late fall. It was the type B virus that was making the rounds last year. An outbreak of B influenza appeared in California. It was first discovered in January in Santa Clara County, and February, March and April it went throughout California. In March it was isolated and studied in an outbreak in the Navy in Illinois, and in the course of the season many spots in the United States reported outbreaks. During this period some C strain viruses were also isolated, however, the period from July, 1953, through June, 1954, was noted for the fact that it had the lowest ebb of influenza in years. This year they are expecting an A influenza epidemic. The first reason for believing that it will be this type is that there were no type A viruses isolated last year, and this virus goes in two-three year cycles. The second reason is that in May and June of this year workers in South Africa isolated the type A influenza virus. The strain isolated there is being studied in the World Health Organization office in London at the present time. At about the same time there were several sharp outbreaks of this A virus in Australia, May and June being their winter. Since August there have been many short outbreaks in the Philippine Islands. The World Health Organization study groups are watching these epidemics very closely. In the United States at the present time there are over 50 laboratories collaborating with the World Health Organization influenza program to describe the epidemic, to isolate the viruses, and to aid in the diagnosis of influenza.

Where is the interepidemic habitat of influenza virus? Influenze virus has been demonstrated to be present in populations during interepidemic periods. This may be the time when many of the subclinical cases are going on, but sporadic cases of influenza occur also. Doctors see them but may not recognize them apart from other acute respiratory diseases, since the disease is hard to differentiate clinically from many other acute respiratory diseases until it becoms epidemic; therefore not until its incidence increases sharply do doctors begin to diagnose it clinically. A second explanation of the interepidemic habitat is the fact that there is an epidemic of influenza in progress somewhere in the world all the time. Thus with our fast means of transportation and our loss of protective antibodies within six months of recovery from a former attack, we find the scourge of influenza with us every winter.

Dr. Thomas H. Haight: The clinical diagnosis of influenza is very difficult. During interepidemic periods there are no distinguishing clinical features separating the disease from certain other viral infections or certain bacterial respiratory infections. During the epidemic periods, it is not so difficult. Although an occasional epidemic may occur earlier, it is rare to find influenzal infections much before about Thanksgiving. The major epidemics rarely get going before December or much later than late February or early March. A typical case of influenza comes on abruptly, often with shaking chills and high fever, and is usually accompanied by a considerable amount of aching, including the head, the muscles, and the eyes. The fever ordinarily ranges between 100 and 104 degrees. The patient is likely to be apathetic, with suffused face and injected conjunctivae. Symptoms are otherwise primarily of the respiratory system, with coryza, mild sore throat, substernal soreness and a cough which is usually nonproductive. Physical findings are generally unremarkable, although occasionally one sees purplish discoloration of the posterior pharynx. The leukocyte count may be slightly increased initially but a normal count or leukopenia is the rule. Nasopharyngeal cultures show a normal flora and blood cultures are negative. The usual duration is two-three days in a mild case. A longer duration suggests a complication, as does persistent leukocytosis, and the most common serious complication, as does persistent leukocytosis, and the most common serious complication is staphyloccocal pneumonia. There is no specific therapy for influenza; the disease is self-limiting, and antibiotics are indicated only for a specific complication or to prevent secondary complications, particularly in young children or elderly people or in patients who have other complicating diseases, particularly of the lungs.

Now do any of these cases presented today illustrate the picture of true influenza? I don't think so. Certainly the first and third patients fit no known pattern of influenza. There is, of course, the time honored diagnosis of intestinal flu, but we have come to recognize that this word "flu" is a misnomer in this instance. None of the influenza viruses has ever been isolated from patients suffering from such gastrointestinal illnesses in spite of repeated efforts in major laboratories in the country. These gastrointestinal illnesses which tend to occur occasionally in epidemic form are probably viral infections, but not influenza. Doctor Jordan and associates in Cleveland succeeded in isolating two filterable agents from the stools of patients with similar symptomatology. Further, they were able to prove that the filterable agents, presumably viruses, could reproduce the same disease pattern when given to healthy volunteers. Our second patient whose main complaints were systemic in origin and who did appear to have some degree of pharyngitis, probably represents another type of viral infection. During World War II, the Army Epidemiology Board had as one of its commissions the Commission of Acute Respiratory Diseases. One of their main problems was to study the frequent and recurrent epidemics of presumptively nonbacterial respiratory infections as they occurred, particularly in military populations. They became impressed with certain variations in the pattern of respiratory tract infection in military populations when contrasted with civilian populations, and the entity ARD (for Acute Respiratory Disease of new recurits) was thought for some time to be specific virus syndrome. It is now quite obvious that ARD is not an entity, but rather there are many other virus infections of the respiratory tract which we are just beginning to understand. Through the use of newer techniques in the laboratories, such as tissue cultures, the use of HeLa cells in tissue culture, and improved serological methods, new viruses are constantly being isolated. Many of these cannot be causally related to infection, but some of them have been found to be so related. Doctor Hilleman at the Army Medical Service Graduate School in Washington, and Doctors Rowe and Heubner of the National Institutes of Health and Doctor Ward of Johns Hopkins have recently isolated such viruses and have shown specific serological evidence of increasing antibody titers to these new viruses. The exact role which these new cytopathogenic agents play in the frequent com-

mon cold-like or other similar mild epidemic respiratory infections needs considerable clarification. We are really just on the brink of this field at the present time. It would appear that the diagnosis of the fourth patient must await the final pathological report, since further serological examinations for the virus encephalitides will be impossible due to the patient's death. There is surely nothing inconsistent with lymphocytic choriomeningitis, nor however, with many other conditions which we need not discuss now.

I am very glad that Doctor Scott has emphasized to you the importance of understanding the results of influenzal serology. One of the commonest failings is to accept a single report showing influenzal antibodies to any of the virus strains as being diagnostic. Actually some of these titers which we have just seen are below what one might expect to find in the population at large, and therefore the serological diagnosis of influenza must absolutely depend on demonstration of a fourfold or greater rise in titer between an acute and a convalescent blood specimen over a minimum of ten days to two weeks. Amazingly enough, even with serial serum studies the laboratory proof of the clinical diagnosis is very hard to come by. We had the opportunity to observe several epidemics of influenza at the Great Lakes Naval Training Center and accumulated a sizable series of patients on whom we had fairly comprehensive information. When we excluded the obvious bacterial infections which occurred during influenza epidemics, it was surprising to find that in this large group of patients whose symptomatology was identical, we could establish a laboratory diagnosis in only one third of the patients by either virus isolation or significant rises in antibody titer. So you see, we have no clear-cut clinical grounds nor indeed any highly sensitive laboratory tests which will enable us to prove the diagnosis of every case of influenza. Dr. Jonas Salk has even postulated there may be some relationship between influenza epidemics and epidemics of other virus infections, and this perhaps may account for the fact that we can prove serologically or by virus isolation only one third of the cases of influenza during an epidemic period. It will take several years for us to understand this better. The problem of using rises in antibody titer as evidence of influenza virus infection is well illustrated by a study of 208 patients with scarlet fever which we made a couple of years ago. It just happened that we were observing these patients with scarlet fever during the same time that an explosive outbreak of influenza occurred on the base, and being interested in surveying these patients, we ran influenzal antibody titers on them too. To our great surprise, we found that 22 per cent of them showed significant rises to influenza virus of the prototype strain. In other words, these patients who were sick with scarlet fever but who presented no further evidence of any other infection had produced antibodies to the influenza virus which was present on the base at the same time. Whether these were truly asymptomatic infections or whether the scarlet fever masked a mild sub-clinical case of influenza is hard to prove, but it does point out some of the difficulties in laboratory diagnosis.

Dr. Harold Muchmore: Would Doctor Scott say something about the use of adjuvants in vaccines? The entire U. S. military population was to have been immunized by October 15 this year with a vaccine for which great hopes were held, partly because of the adjuvant it contained.

Doctor Scott: Adjuvants are agents added to the vaccine to delay the metabolic breakdown of the antigen and to prolong its stimulus to antibody formation. Perhaps the most commonly used agent is mineral oil.

Doctor Wolf: What percentage of people can be successfully immunized against influenza?

Doctor Scott: Probably about 85 per cent. Some people are just poor antibody producers, and as we have said, the various strains differ in their antigenicity.

Doctor Haight: Doctor Scott has already mentioned the temporary nature of the immunity the vaccines produce. This is a point worth emphasizing a bit, for there is an important immunological principle involved. The vaccines employing living organisms such as vaccinia for smallpox or Theiler's vaccine for yellow fever confer a degree of immunity comparable to the natural infection. Vaccines containing inactivated organ-

isms fail to do this; hence the need for recurrent vaccination to protect against influenza or poliomyelitis, among many others. The problem of protection against influenza is far from solved, so in the meantime we can only hope there is sufficient antigenic relationship between the vaccine and the prototype strain to afford protection against the expected epidemic.

Doctor Wolf: Should we attempt to isolate patients such as these we have presented today?

Dr. Scott: Isolation is not feasible. These diseases are usually spread by droplet infection, with the respiratory tract the usual portal of entry. Healthy carriers as well as patients probably spread the disease, and generally the patient will have passed the most infectious stage when the diagnosis is made.

Dr. Haight: As a general policy, patients such as our fourth case are isolated in most hospitals, and this is probably right. Theoretically it should make no difference, for the viral infections have long incubation periods and are generally most contagious just before the major symptoms and signs appear, as Doctor Scott has implied. However, the possibility of spread from patient to medical personnel to other patients cannot be excluded, and at a minimum these severely ill patients should be in a single room, even when strict isolation techniques are impractical.

Doctor Wolf has asked if there is a relationship between influenza virus infections and *Hemophilus influenzae.* The evidence is certainly not clear, but during the influenza pandemic of 1918 many investigators felt that *H. influenzae* was isolated more frequently from cultures than would be expected. Subsequent studies in later, milder epidemics suggest a similar relationship. What this means, we don't know. Certainly no pathogenic activity can be ascribed to *H. influenzae,* for patients with influenza virus infections do not die with H. influenzae infections. This potential synergistic microbial relationship, like the problem of laboratory diagnosis of influenza, remains to be solved as we develop newer techniques and more sensitive tests.

Dr. Wolf: We would like to continue this interesting discussion but time is up. I want to thank those who have presented and discussed cases. We have learned that these epidemic diseases are presumably due to viruses but no during early fall to the influenza group of viruses. They are thought to be spread by droplet infection, but one wonders in view of their similarity to dengue whether or not some of them may be spread by mosquitoes or other insect vectors. As far as treatment is concerned it is clear from some of Doctor Haight's earlier studies and those of others that antibiotics have no curative value whatever. Neither is there evidence that antibiotics reduce the incidence of the relatively rarely occurring bacterial complications. Nevertheless antibiotics will probably continue to be widely used — just in case.

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The site of Dramamine's action is probably in the labyrinthine structure.

*Swartout, R., III, and Gunther, K.: "Dizziness:" Vertigo and Syncope, GP *8*:35 (Nov.) 1953.

PRESIDENT'S LETTER

The midwinter meeting of the House of Delegates was held in Oklahoma City on December 12. It is always gratifying to the officers of the Association and to the Executive Office that so many busy doctors are willing to donate their time to conducting the affairs of the Association. If you will remember, the twelfth of December was very cold, and the roads were either icy or snowy, but it did not deter 75 doctors from all parts of the state from appearing at the meeting.

The House of Delegates enthusiastically accepted the recommendation of the Building Committee that a building site be purchased and plans be obtained for our new office.

Our only out of state speaker was Mr. John Parrish, secretary of the St. Paul Mercury Indemnity Company. Mr. Parrish was very complimentary in telling us that the company was satisfied with its loss ratio in Oklahoma, and that this could not be said about other areas in the nation. He felt that it was due to the cooperation among our doctors, and the result of the doctors' understanding of the basic problems concerning malpractice suits. Our Executive Office plans to reprint Mr. Parrish's paper, and I urge you to read it carefully.

Many other things were discussed and will be reported to you at the County Society meetings by delegates and members of the Council.

Bruce R. Harrison

President

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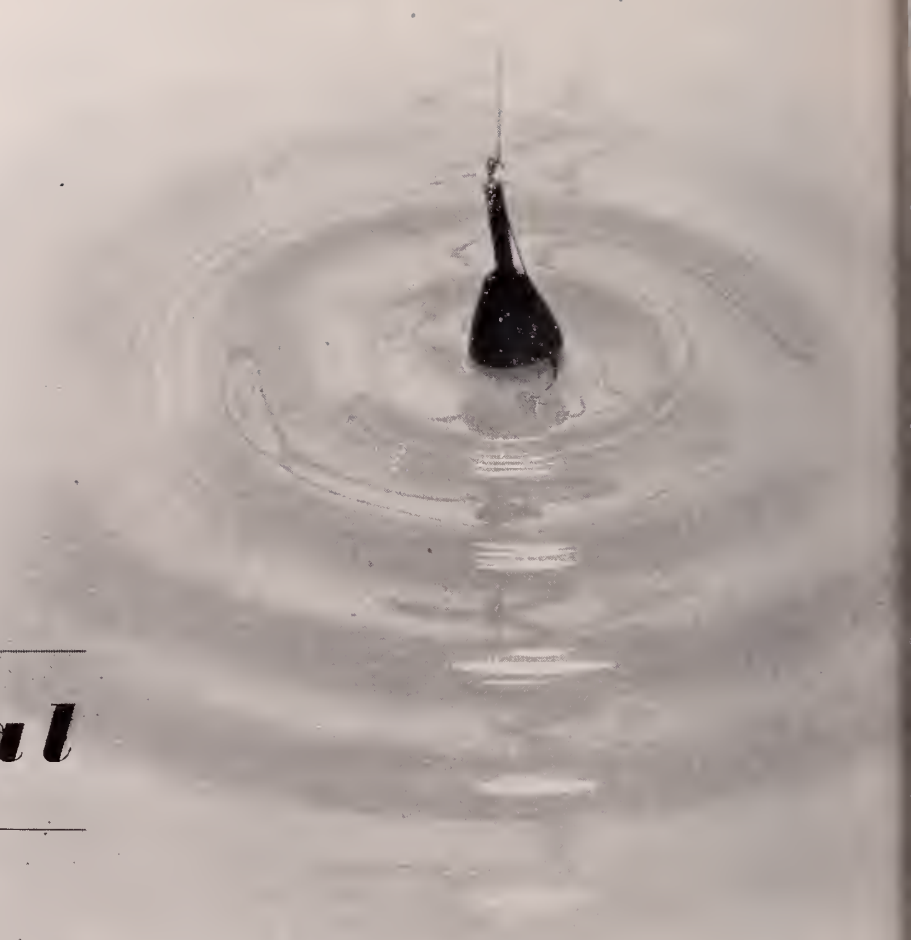

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Book Reviews

PRACTICE OF ALLERGY. Warren T. Vaughan, M.D., Revised by J. Harvey Black, M.D. Third Editon. 1954. C. V. Mosby Company, St. Louis, Missouri. Price $21.00.

Doctor Vaughan in 1930 wrote *Allergy And Applied Immunology.* At that time, little was known of allergy and the book was written to be used both by the physician and the patient. As an outgrowth of *Allergy And Applied Immunology,* Doctor Vaughan wrote *Practice of Allergy* for the benefit of the medical profession. Its companion and smaller volume, *Primer of Allergy,* was written primarily for the patient.

Practice of Allergy was originally written in 1939 and has been revised and brought up to date by Dr. J. Harvey Black. It is a "must" for any physician who is practicing allergy. The book covers all of the ramifications of allergic disease and has the most complete bibliography of any volume of a similar nature. Its use is not limited to those specializing in allergy as it contains a wealth of information which should be helpful to all physicians, regardless of their type of practice.

The revised chapter on Fungus Allergy is helpful in view of the more recent emphasis being placed on this subject. The chapter on Pulmonary Function Studies is a valuable addition.

The greatest objection is its price; however, I feel that its value as an excellent reference text as well as the most complete volume pertaining to the various allergic diseases, far outweighs this objection.

—Vernon D. Cushing, M.D.

PRIMER OF ALLERGY. Warren T. Vaughan, M.S., MD., Revised by J. Harvey Black, M.D. Fourth Edition, 1954. C. V. Mosby Company, St. Louis, Missouri. Price $4.25.

This small volume of 191 pages was written primarily for the allergic patient. As Doctor Vaughan stated in his preface to the first edition, this book is an outgrowth of his original text, *Allergy and Applied Immunology.*

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The author has attempted to explain in simple language what happens in allergic disease and in the allergic individual. The book is adequately illustrated, including some cartoons pertaining to allergic situations by the late H. T. Webster. Many of the chapters are concluded with a question and answer section which patients should find helpful.

Doctor Black has done an excellent job in revising this book, bringing into the fourth edition the newer aspects of drug treatment and changes more in keeping with the present concepts of allergic disease.

I believe that the book is of definite value and can be recommended without reservation to the allergic patient.

—Vernon D. Cushing, M.D.

Editorials

Letter to the Editor

Obstetrical Anesthesia

Anesthesiologists in private practice can perform a great service for obstetrical patients who come into smaller community hospitals. This can be done by enacting a more vigorous training program for interns who plan to become practitioners in the smaller cities, and by offering refresher courses for established practitioners.

We need alert, sharp physicians who know the hazards of anesthesia, who are grounded in the practical problems of that work, and who think ahead, that they may know how to correct an untoward situation should it arise. Anesthetic emergencies call for immediate action — not watchful waiting.

The problem of obstetrical anesthesia is one which should be thought through with great care. The practitioner must accomplish delivery under the least noxious anesthetic technique in order to preserve the mentality of every newborn baby. Cyanotic or depressed babies must be cared for immediately — oxygenation is the answer to most new born problems. This must be carried out rapidly but with gentleness. The pharynx and trachea must be suctioned and cleared, an endotracheal tube should be inserted just past the vocal cords and gentle artificial respiration started. Gentleness is essential in dealing with a newborn baby especially if the infant is premature. Depressed, hypoxic babies offer no resistance to opening the mouth. The vocal cords usually are open and in no spasm. Select the endotracheal tube of optimum size, being careful to avoid trauma to the larynx and cords. Secure this tube by hand to avoid movement, and begin the artificial respiration. This can be done by moving the infant's chest and insufflating oxygen or by using one's own breath in an oxygen-T-tube combination to barely move the chest wall. Infant lungs inflate easily. Intermittent positive pressure is applied only by the split second. To hold this pressure longer may result in alveolar rupture and disaster. This technique must be done properly. There are at least two positive pressure machines which are helpful in combatting this problem, but these often are not available even in some large obstetrical centers. The above method is offered as a simple technique of resuscitation.

All practitioners should take some of their time to visit our large anesthesia and obstetrical sections to refresh their minds regarding practical and useful techniques of anesthesia and resuscitation. The anesthesiologists will welcome the chance to answer questions and to demonstrate practical techniques which will be useful and in many cases life-saving.

Carl C. Morgan, M.D.
Tulsa, Oklahoma

Industrial Claims and Expert Witnesses

The Industrial Relations Committee of the Tulsa County Medical Society recently joined with a liaison committee of six prominent attorneys appointed by the Tulsa County Bar Association to explore certain problems arising out of the quality of expert medical testimony before the Oklahoma State Industrial Commission.

The joint committee developed the following recommendations:

1. That legislation be introduced into the Oklahoma State Legislature to reorganize the Oklahoma State Industrial Commission, creating a greater tenure of office for members, increasing the present low rates of compensation, and encouraging a more careful selection of qualified judges experienced in compensation cases.

2. The creation of an educational program within both the Bar and Medical associations to encourage members of each to meet their moral obligations to handle their

responsiblities in a judicial manner insofar as medical testimony is concerned.

3. That study be given as to the desirability of establishing a panel system of expert medical witnesses whereby claimants would be subjected to physical examination and evaluation of injury by a panel of impartial medical doctors. Such a study would encompass the method of appointing and compensating the panel, and the legislation would be required to place this proposal into effect.

These recommendations, prepared in more detailed form, were forwarded to the Legislative Committee of the Oklahoma State Bar Association and to the Public Policy Committee of the Oklahoma State Medical Association, for consideration in the preparation of proposed legislation for the 1955 session of the Oklahoma State Legislature.

In elaborating upon Recommendation Number Two above, the Committee suggested a public relations program in the Medical Society based on the following points: (a) Physicians should be educated as to their responsibility to make an honest examination and report, neither exaggerating or minimizing injuries, (b) Greater attention to physical examinations would be encouraged with the elimination of too brief and inadequate examinations, hasty judgments and snap decisions, (c) The position of the company doctor would be made more independent to permit an honest appraisal of injuries without undue concern for the personal interests of his employers, (d) Physicians would be encouraged to use more care in stating fully the effects of the examination in written reports, (e) Physicians would be encouraged to deliver their testimony in trials more impersonally so as not to give undue influence, one way or the other, through their conduct on the stand.

The matching educational program in the Bar Association would seek: (a) The instruction of attorneys in their personal responsibilities to both the patient and the defendant in seeking a proper evaluation of the injury, creating an emphasis upon the seeking of a judicious settlement rather striving for the maximum amount, (b) The handling of expert medical witnesses in an honest manner while on the stand, and (c) The elimination of the persistent use of expert medical witnesses whose testimony is known to be unduly prejudicous, unreliable, and purchased.

The *Journal* believes this program will ultimately be of value in improving the conditions of medical testimony before the Oklahoma State Industrial Commission, and also that it will create a greater harmony between doctors and attorneys, both as groups and as individuals.

The final Recommendation proposed by the Joint Committee will be the toughest nut to crack. The problem of securing an expert witness without bias is difficult, since under the law every client, employer and employee, is protected in his right to offer any evidence which may be material. Consequently he cannot be prevented from selecting his own witnesses. Nevertheless, just as long as this practice continues in the case of the paid medical expert, we shall rarely be able, even in the most conscientious witness, to provide against the unconscious bias which may exist in the minds of the Commissioners. This it is which is the chief evil of the system.

No doubt some improvement may be expected from the erection of a standard of qualification as has been suggested, but to do this and yet leave untouched the greatest of the evils complained of, would leave little gained.

A feasible and simple way of bringing about a change in this respect is to leave the selection of the experts for both sides in the hands of the Commissioner.

The objection arises that the Commissioner may be good judge of law and yet a very poor judge of doctors. As long as there is no standard of qualification, this objection will have much force, but if a Commissioner were compelled to make his choice from men whose qualifications have been certified by the Oklahoma State Medical Association, on the basis of experience in practice, or on special training, he could not make any serious blunder and the Commission hearings would be in a fair way to get unbiased opinions at least and a reasonable degree of competence.

Scientific Articles

Management of the Patient With CORONARY ATHEROSCLEROSIS

J. R. KITCHELL, M.D.

History

Although the symptom complex of angina pectoris has been known for centuries, coronary artery disease and myocardial infarction have been recognized for only a few years. Dr. George Dock[1], in 1896, reported the first case of coronary thrombosis diagnosed before death and confirmed by autopsy in the United States. Dr. James B. Herrick[2], in 1912, described the clinical features of sudden obstruction of the coronary arteries. It was some time before most physicians were aware of coronary artery disease as a frequently encountered clinical problem. As late as 1915, Osler and McCrae's textbook "Modern Medicine" made the following statements.

"The *symptoms* of obstruction of the coronary vessels are not very characteristic, and it is only rarely that the lesion can be diagnosed during life. Usually in these patients there is rapidity and weakness of the heart's action, with marked irregularity.

"The *diagnosis* of coronary artery thrombosis or embolism is at best a question of probabilities . . .

"The diagnosis being so uncertain, it is impractical to discuss the prognosis."

Etiology

The presentation of an acceptable etiological discussion to fit all cases of coronary artery disease is not yet possible. This is especially true in regard to the commonest form of coronary disease, that of atherosclerosis. Although research is going on at a constantly accellerating rate, at this time discussion of etiology must remain in the realms of theory and opinion.

Atherosclerosis, unlike senile forms of arteriosclerosis, must be a disease entity rather than the inevitable effect of the aging process. Morrison[3] believes it to be a metabolic disorder based on three complex factors (Figure I). The first is the high fat, high cholesterol diet consumed in world areas where atherosclerosis is common. The second is a constant disorder in blood lipids and lipoproteins probably due to malfunction of the liver. The third factor is in endocrine imbalance affecting certainly the thyroid and the estrogenic and androgenic hormones. It is beyond the scope of this discussion to go into all the arguments for and against this theory.

THE AUTHOR

Doctor Kitchell received his B.A. from Rice Institute, 1928; M.D., University of Texas, 1932; certified by American Board of Internal Medicine in Internal Medicine and Cardiovascular Disease. He is Associate in Medicine, University of Pennsylvania, School of Medicine; Associate Professor of Cardiology, University of Pennsylvania, Graduate School of Medicine; Chief, Department of Cardiovascular Disease, Presbyterian Hospital, Philadelphia; Staff and Member, Board of Directors, Children's Heart Hospital of Philadelphia; Chairman of Rheumatic and Congenital Heart Disease Committee, Pennsylvania Heart Association; Member Founders Group of the Scientific Council, American Heart Association. Doctor Kitchell was a guest speaker at the 1954 annual meeting.

1. Diet.
2. Defect in lipids and lipoproteins probably basic is the liver.
3. Endocrine imbalance
   a. Thyroid substance
   b. Estrogen and androgen
   c. Other endocrine secretions
4. Heredity.
5. Mesomorphic somato type (rarely seen in pure etomorphs or pure endomorphs).
6. Time.

Figure 1

There have been literally dozens of reports implicating animal fats (dairy products, meat fats, eggs) as atherogenetic agents. However, Walker[4] recently made a very interesting study which points out that in humans the total caloric intake is a very important factor. Overeating of food in general may be more important that the total amount of dietary fat or cholesterol ingested. Master[5] points out that obesity in men is associated with an increase in both hypertension

and coronary disease, but obesity in women does not seem to produce the same effect.

In general it appears that coronary disease patients, especially the younger group, are characterized by an increased familial occurrence, a greater preponderance of men in higher levels of serum cholesterol. Body build seems important. Coronary victims are shorter and wider with increased anteroposterior chest diameter as compared with control groups[8]. The most important modifying factor is the passage of time.

Discussion and Treatment of Various Phases Preclinical Types

The physician recognizes coronary disease only when signs and symptoms of angina pectoris, coronary insufficiency, or myocardial infarction occur, but the disease process begins much earlier (Figure II).

TYPES OF CORONARY DISEASE

1. Preclinical (no signs, symptoms or pathognomic tests founds in these cases)
2. Clinical coronary disease
   a. Asymptomatic—Ecg changes only
   b. Angina pectoris—
      without Ecg changes
      with Q and T wave changes
      with conduction defects
   c. Acute coronary insufficiency
   d. Acute myocardial infarction
   e. Post-infarction state

Figure 2

The recent report by Enos[10] and his associates on autopsy findings in 300 soldiers killed in battle or by accident in Korea is rather startling. The average age of this group was only 22.1 years, but in 77.3 per cent of them gross evidences of coronary artery disease were found. This work would suggest that three-fourths of the males in this country have already developed gross coronary lesions when they are still in their early twenties. This appears to be the foundation for death at age 50. Considering such a long evolution of pathology, it is not surprising that short-term therapy, dietary or otherwise, as we practice it today, does so little for the patient. Do you realize what I have just said?

Treatment in the early preclinical stage can only be dietary and aims at keeping body weight at, or slightly below, the so-called "normal levels." Certainly such a program can do no harm. Teaching an individual to control his appetite while he is young may be the most valuable lesson he ever learns. The average American diet contains from 125 to 175 grams of fat daily[11]. This is a terrific amount of fat, as far as coronary disease in concerned.

A typical low-fat hospital diet contains only one-third this amount (or 50 grams) and is a fairly palatable diet. A 50 grams of fat per day diet would have little effect on a short period study, but cutting down two-thirds of the fat from the average diet might, over a lifetime, prevent or slow the day-to-day increases in atherosclerosis which must be occurring in the average man's arteries.

Only time and study will prove or disprove this theory. In the meantime it might be wise to be on "the dietary wagon."

Clinical Types
Asymptomatic Coronary Diseases

This lesion should be treated as the preclinical types already described. The diagnosis depends on the finding of signs of coronary disease in the electrocardiogram in the absence of symptoms.

Angina Pectoris

Usually the first of the symptoms of coronary disease is angina pectoris. This may manifest itself by almost any kind of pain. It is generally believed to result from a disproportion between oxygen supply and demand of the heart muscle. Raab and Lepeschkin[12] feel that the simple supply and demand concept may be insufficient and postulate alterations in the adrenal hormones.

The common denominator in angina pectoris is that the pain follows or is associated with physical exertion or emotional excitement and is relieved by rest and nitroglycerin. In the making of this diagnosis it is more important to listen to the patient than to his heart; to pay more attention to what you see in the patient than to what you see in his electrocardiogram.

In treating angina pectoris one does well to remember the etiological factors. The patient's activities should be governed by the pain. A nitroglycerin tablet should be placed under the tongue when pain begins and should be used prophylactically if there is

foreknowledge of coming events which would ordinarily provoke an attack[14]. It is my opinion that the worst mistake a patient can make with a nitroglycerin tablet is to fail to take it when it is needed. When in doubt, take it.

The control of physical problems is relatively easy. This is not so with the problems of emotion and excitement. There are patients who can bring on the pain of angina by worry alone. Do not underestimate fear and worry; they are real hazards. It is probably true that some persons with normal hearts can be frightened to death[15].

Not the least of the emotional strains patients with angina face is the fear of the disease itself. It is often useful in allaying this fear to use the following simple analogy. The pain syndrome is likened to the traffic light on the corner. The body, not being equipped to flash lights, has simply substituted pain and freedom from pain for red and green lights. One must stop on pain, the red light, until rest or a nitroglycerin pill relieves this pain, and so turns on the green light. Although this may sound ridiculous to you, it is surprising how many patients are, by the use of this analogy, able to rationalize the pain and thus eliminate some of its components which are due to fear.

Besides the avoidance of exertion and emotional strain, the use of nitroglycerin or amyl nitrate and dietary control, there are few if any real effective therapeutic measures. Evaluation of the action of coronary dilator drugs is difficult. Such drugs should increase coronary flow without an increase in the metabolism or work of the heart[17].

One should remember that the evaluation of such drugs is made on relatively normal coronary trees; the ones we are attempting to treat are diseased. A solidified coronary artery (whether from atheroma or calcium deposit in atheromatous placques) is no more capable of dilatation than an iron pipe. If there is a rigid area partially blocking an artery there cannot be any increase in blood flow beyond this point.

The fact that many patients with angina react favorably to "the ceremony of medication" with any new drug brings much anguish and distress to scientists trying to evaluate such drugs. However, as doctors trying to alleviate suffering and to prolong life, I feel we should use this "ceremony of medication" reaction when possible. We should keep well in mind while doing this that our results are due to medication and a psychological reaction on the part of the patient.

Pentaerithritol tetranitrate (Peritrate)[R] is said by some to have much of the effect of nitroglycerin, but to have a longer duration[18]. Others say it is not effective[17]. I am not sure who is right but I seem to use it or triethanolamine trinitrate biphosphate (Metamine)[R] with some good results.

The xanthines have the same limitations as other coronary dilators in general. They may be tried but if in a few days there is no beneficial change one might as well give them up. The use of theophylline ethyline diamine intravenously, or preferably rectally in doses of seven and one-half grains may be very helpful in relaxing spasm of the bronchial tree in paroxysmal nocturnal dyspnoea or in the dyspnoea of heart failure. The use of this drug intramuscularly is attended by severe pain and should be avoided if possible.

It would be well to say a word here about alcohol. No matter how pleasantly it is compounded, alcohol is not a coronary dilator[18 19]. It acts, like morphine, as a sedative which increases the threshold of pain while promoting a sense of well-being—and it is quite a promoter! In this sense, it is as dangerous a drug in angina pectoris as it is in automobile driving, because the patient tends to cross his safety threshold and may suffer severe or even fatal damage.

Papaverine is a useful drug in severe angina but it must be used in very large doses which have the two disadvantages of high cost and high side-effect incidence. Therefore, I seldom use it.

Many cases of angina are favorably affected by small doses of one of the barbiturates combined with atropine. These drugs tend to lessen nerve tension and to block vagal effects.

Surgeons have tried for years to find a satisfactory surgical procedure to relieve severe angina. It is hoped that such surgical measures will be improved upon in the future because at present they are not practical[20]. The high sympathectomy in some cases seems to break the pernicious cycle of

pain in status anginosus[21]. The operation interrupts the anginal pathway from the first to the fourth thoracic ganglia bilaterally and is a rather formidable procedure in a patient with serious coronary disease. It also carries the disadvantage of Horners Syndrome, postural hypotension, severe sweating in the groins, and swollen nasal membranes as well as the removal of a pain which serves to warn the patient of over-exertion.

A relatively simple surgical procedure, cardio-pericardiopexy, seems to have some merit. The operation is that of spreading sterile powdered magnesium trisilicate (USP Talc) over the surface of the heart inside the pericardial sac. The talc acts as an irritant which produces a talc granuloma involving the superficial surface of the myocardium. It stimulates the development of interarterial coronary anastomoses and produces adhesive pericarditis. The results, as reported by two groups[22, 23] of investigators, are encouraging. Thompson and Plachta's series was of 67 cases. Ninety per cent of these operated patients were improved. All had been medical failures and were almost completely incapacitated. Doctors Robert Glover and Thomas O'Neill at Presbyterian Hospital in Philadelphia have done a number of these operations in the last year. It is too early to report on them, but the operative mortality thus far has been zero.

It should be remembered that in many cases of angina there is a spontaneous development of adequate collateral coronary circulation. This is a slow process but one can hope that such changes are taking place while the patient is being carried on the programs just outlined[24].

To summarize the facts about angina pectoris, there seems to have been no outstanding discovery since Brunton introduced amyl nitrite in 1867 and Murrell introduced nitroglycerin in 1879. And although we glibly speak of coronary and peripheral vasodilatation by these drugs I wonder if we really do know today exactly how the nitrites relieve pain.

We must recognize that there is a borderline condition between the syndromes of angina pectoris and asymptomatic coronary disease on the one hand and the picture of myocardial infarction on the other[21]. This is often termed acute coronary insufficiency[25]. Less serious than acute infarction, it nevertheless should be treated as infarction, which it resembles at the onset. These patients, after recovery from the acute phase, should be considered as impending cases of infarction.

Myocardial Infarction

Whereas emotion and exertion are definitely related to angina pectoris, myocardial infarction seems to be a spontaneous event in the course of atherosclerosis[26]. By and large, season, time of day, and occupation do not influence the incidence significantly.

In the first 24 hours after a myocardial infarction, or certainly in the first 48, one can fairly well classify the cases as to "good risks" or "poor risks." In this early period the prognosis of the immediate illness is determined principally by the size of the infarction area and by whether or not certain complications develop[27]. (Figure III). The classification of patients into "good risks" and "bad risks" categories is important because the good risk cases require very little in the way of active therapy. Their mortality rates have been estimated between three per cent and nine per cent by various investigators[28, 29]. Schnur[30] has devised a scoring system which he terms a "Pathologic Index Rating" to be used in computing risks. All of Schur's cases scoring 60 and above died.

Attention has been called to the fact that vascular spasm may play a part in coronary occlusion. Banting and his associates showed that intravascular thrombi could be produced in the coronary tree by vagal stimulation[16]. Macht[32] points out that even in healthy persons, of both sexes, apprehension, fear, or intense worry markedly accelerate blood coagulation. It is evident, therefore, that these patients need psychological as well as pharmacological therapy. It is a poor idea to allow the myocardial infarction patient any visitors other than the immediate family. It is tiring to a patient to "entertain" visitors and the psychogenic hazard of visitors is great. This is even true of physicians as social visitors. Probably you have all had the experience of being greeted by a depressed patient who reports that he just had the news from a friend that "Old Joe Blow just died with the same trouble I have." It is discouraging to enforce rest and medica-

tion on a patient only to find he has recurrent angina or a fresh infarction caused by nervous tensions which could have been avoided.

The treatment of the "good risk" patient resolves itself into rest. This, in many cases, need not be more than confinement to the sickroom, the patient being allowed chair or bed rest as desired. Bathroom privileges should be allowed for bowel function. A bedside commode should be used if a toilet is not readily available. Even in "poor risk" patients the use of a bedside commode has been found safer and less taxing to the circulation than the use of a bedpan. Benton, Brown and Rusk[38] have demonstrated that besides the psychological trauma the use of a bedpan is an unphysiological procedure from the standpoint of energy cost.

The good risk patient should do well on a light diet, plus mild sedation. Atropine or hyoscine are useful to block possible reflex vascoconstrictor spasms. Although some feel nitroglycerin is hazardous in infarction due to pressure drop[33], I have used it often without deleterious effect in the good risk case who occasionaly in the first few days may note angina. Probably it should not be used in the poor risk case. The duration of rest in these individuals (meaning good risk cases) need not be long. Many of them can be back to light work in six to eight weeks. Indeed, they often are better off at work where their minds can be gotten off the fear of their disease. Most of these people, psychologically speaking, have been scared to death by the implications of this disease, and they need to get their attention drawn away from it.

MYOCARDIAL INFARCTION

GOOD RISK PATIENTS

Those whose pain is controlled promptly by narcotics and who do not have any of the immediate complications of infarction.

POOR RISK PATIENTS

Those who have any of the following—

1. Persistent and intractable pain.
2. Shock.
3. Congestive failure.
4. Serious arrhythmias such as—
   a. Atrial flutter or fibrillation.
   b. Nodal rhythms.
   c. Ventricular tachycardia.
   d. Conduction defects.

Figure 3

The "poor risk" patient by definition is one who has besides his infarction one or more of the immediate complications of this disease. The treatment of "poor risk" patients, therefore, resolves itself into the treatment of the immediate complications (Figure III).

Pain

Pain should be relieved by prompt use of morphine or meperidine (Demerol). Meperidine relieves pain but does little to allay the individual's apprehension or fear. It has already been pointed out that such emotional tension, as fear, may contribute to further infarction[32 16]. Morphine, in my experience, is better because it not only relieves pain but also dispels apprehension. Atropine, or scopolamine, should be given at the same time to block vagal effects. Recurrent or continuing pain is a sign of continuing myocardial damage. Such pain, continuing for days after the initial attack, is often seen in patients who die. It is a major complication. Occasionally aminophylline (0.48 grams) or papaverine hydrochloride (0.03 to 0.09 grams) given slowly intravenously will aid in controlling such pain.

Shock

This is the most dangerous complication of myocardial infarction. It is characterized by cold perspiration, a greyish color, weakness, and on occasion nausea and vomiting. If the systolic blood pressure falls to 80 mm. Hg or less in a previously normotensive individual, or to 100 mm. Hg in a previously hypertensive patient, one may assume a state of shock is imminent if not already present[34]. However, unless the other signs mentioned above are present, shock has not fully developed. Such a condition may follow closely on the pain of acute infarction or may come hours or even days later. The mortality of serve shock which is not controlled is said to be 80 per cent or more, but with proper and prompt treatment this figure can be lowered.

When one is aware of shock, or imminent shock, and the patient is at home, the immediate injection (intramuscular or intravenous) of methoxamine (Vasoxyl)[R] or mephentermine sulphate (Wyamine)[R] in doses of 5 to 15 mg. are of value. Phenylephedrine

hydrochloride (Neosynephrine)[R] intravenously (one ampule) in doses of 2 to 7 mg. may be given. These medications may suffice in mild shock but if they are unsuccessful in returning and holding blood pressure levels above the shock point, one should begin the use of noradrenalin (Levophed)[33 34 35] at once. This hormone, probably the most valuable agent to combat shock, is administered by a continuous intravenous drip at a rate adjusted to maintain the blood pressure at the desired level. Noradrenalin is diluted 4 mg. (one ampule in 500 or 100 cc. for this purpose. Care should be taken that none of this solution extravasates about the venipuncture site due to the danger of phlebitis and slough. While this medication is being given, blood pressure determinations should be made frequently; its use requires constant medical and nursing attention. For this reason a hospital is the best place for such therapy but due to the gravity of the situation, one should not hesitate to use it in the home if it is not feasible to get the patient to a hospital.

Cortisone, parenterally, in doses of 50 to 100 mg. daily may potentiate the effects of noradrenalin of a patient fails to respond. Desoxycorticosterone acetate, as a 2 mg. sublingual tablet, may also be useful. When using these hormones, the usual precautions must be observed relative to sodium and potassium balances.

In shock and cyanosis, oxygen is an important agent. Oxygen saturation is decreased to 80 per cent or less in patients with shock and with pulmonary edema[36]. Although oxygen tents are comfortable to some patients, the concentration is usually low in these (about 40-60 per cent). They are expensive and unhandy. Oxygen masks give high concentration but are poorly tolerated by most patients. The cheapest and best all-around method of oxygen administration is by means of nasopharyngeal tube. About 45-70 per cent concentration can be maintained if the catheter is passed into the nose a distance equal to that from the external nares to the tip of the ear lobe[34]. Oxygen should be given continuously while the patient is in shock or pulmonary edema. It may be stopped when and if recovery is apparent.

Cardiac Failure

This may begin almost at once or may come on days or weeks after infarction. It not infrequently accompanies, and may be an etiologic factor in, shock. It is treated by digitalis, a low sodium intake, diuretics, oxygen (in the presence of pulmonary edema), and a sitting position in bed or chair. Morphine may be a great help in these cases by affording rest. It should, of course, be given in doses so repiratory embarrassment does not occur.

There are many forms of digitalis. The best form of digitalis for you to use is the one you are accustomed to—the one you manage best. The most useful to me has been digoxin which may be given intramuscularly, intravenously, or by mouth. It has a fairly rapid action (from 30 minutes to two hours) and is excreted rapidly enough that one seldom has difficulty with toxicity The average dose is 1.5 to 2.0 mg. immediately, and 0.25 mg. every two hours until digitalization is complete. Thereafter, 0.25 to 0.5 mg. is the usual daily amount given to maintain digitalization. If very rapid digitalization is needed, lanatoside C (Cedilanid)[R] in doses of 1.6 mg. intravenously is much safer than ouabain or strophanthin.

In all cases where digitalis preparations are used, one should be sure that the patient has not previously received this medication. If he has, then one should proceed with therapy cautiously, using divided doses. The old idea that the incidence of myocardial rupture[37] and catastrophic arrhythmias after infarction are influenced by digitalis administration is not factual[38]. Therefore, when myocardial failure is evident, digitalis should not be withheld.

Thromboembolic Complications

There are in general two types of thromboembolism. The one originates within the heart itself. the other is an extra cardiac affair. While there is little doubt that anticoagulant therapy has reduced deaths due to thromboembolism, the indications for anticoagulant therapy are not yet completely established. Besides the contraindictions inherent in the use of any powerful drug, there must be adequate laboratory control when these agents are being used.

Outside the hospital one is more likely to

get into difficulties with anticoagulants than without them. Many physicians feel they should only be used in poor risk cases. For these reasons I will not go into further discussion of their use in this paper.

Careful medical and nursing attention is needed in all of these cases so that patients do not lie too long in one position. Passive and active leg and foot exercises in the bed patient and care in avoiding pressures under the knees in chair patients are useful prophylactic measures. Elastic stockings and ace bandages are often of value when patients are first gotten out of bed. One should not forget the old rocking chair may come in handy here.

Vomiting and hiccuping may put a severe strain on the patient with myocardial infarction. The newly introduced drug, chlor promizole (Thorazine)[R] in doses of 25 to 50 mg. every four hours will often quiet either or both these complications. This drug is a sedative and one should not use other sedation while it is being given.

Arrhythmias

Disturbances in cardiac rhythm frequently occur in acute myocardial infarction. In arrhythmias with rapid rates or irregular rhythms, there is increased cardiac work. Thus auricular tachycardia, flutter and fibrillation may contribute to shock or failure. Occasionally these arrhythmias terminate spontaneously or after morphine is given. Ten or 15 mg. of methoxamine *(Vasoxyl)*[R] intravenously may check atrial arrhythmias[39]. Digitalis is the drug of choice if such rhythms are persistent. If the need is great and there is definite knowledge that the patient has not previously had digitalis, one can give *Cedilanid* in a single intravenous dose of 1.6 mg. If the patient has had previous and unknown quantities of digitalis, then small intravenous doses of *Cedilanid* are used cautiously. In patients not in emergency status use your own digitalis preparation.

Occasional ventricular premature beats need no treatment. If these are quite frequent, quinidine in doses of 3 to 5 gr. every four hours, or pronestyl (500 mg.) every four to six hours, will be found useful.

The ventricular arrhythmias (tachycardia and flutter) are so dangerous that one is justified in using quinidine intramuscularly —the injectable lactate, gluconate, or hydrochloride, in doses of 3 to 5 grains and repeated every two to four hours as needed. Intravenous administration of quinidine is so hazardous[40] it should never be undertaken without electrocardiographic control during the very slowly given injection. Procaine amide *(Pronestyl)*[R] is used preferably in doses of 0.5 to 1.0 grams, not faster intravenously than 0.1 gram per minute.

Post-Infarction Cases

Some people, in fact a great many, who have myocardial infarction, recover completely, at least from the functional standpoint. Of the group studied by Master and Jaffee[41], 80 per cent of surviving myocardial infarction cases returned to work within three to six months after the initial cardiac insult.

These folks must watch their diets so they do not become overweight. They should keep their activities below the symptom level if possible. They do not need routine medication except for symptoms.

To avoid much of the psychological and physical invalidism which exists they should be encouraged to go back to work and live normal lives as soon as is physically possible. But

Don't let them get fat!

In conclusion it can be said there has been little change in the treatment of angina pectoris although its prognosis is viewed more hopefullly today. Recent developments in the treatment of myocardial infarction have improved the outlook for this lesion quite definitely. In the future it appears more thought will have to be given to prevention of atherosclerosis and it is possible that some of these preventive measures will have to be instituted in the teens and early twenties, if we are to prevent clinical disease in middle age.

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Use of An Anorexic Antidepressant in the Control of NAUSEA *and* VOMITING *of Pregnancy*

PAUL E. CRAIG, M.D.

The discovery that an anorexic drug was of value in the management of nausea associated with pregnancy evolved from the routine, prenatal administration of a dextroamphetamine sulphate (5 mg.)—amobarbital (32 mg.) combination to control weight-gain and to elevate the mood through its effective antidepressant action.

This drug combination, Dexamyl, not only lessened the appetite and improved the psyche but also subdued the tendency to vomit without inducing an overwhelming drowsiness.

A brief review of the theories of etiology and definitive treatment will acquaint the reader with the multifaceted problem of nausea and vomiting of pregnancy. It will also demonstrate the rationale of my controlled study.

I. Incidence

Nausea and vomiting occur in about 50 per cent of all pregnancies[1, 2, 3]. Usually of a mild nature, these symptoms occur about the fifth or sixth week of the pregnancy and disappear after the third month. However, a sufficiently large number of women experience moderate to severe nausea and vomiting through the third month and even through the entire pregnancy to create a real medical problem. As reported in Hall[4] probably one-third of the patients suffer from severe nausea and vomiting. Even those who have only mild nausea, or mild nausea with occasional vomiting, are uncomfortable and may become depressed and more susceptible to emotional influences.

Nausea and vomiting of pregnancy have a higher incidence among high-strung women[5], those who have more leisure time[4], and those in the Western civilization[6]. Interestingly enough, hypermesis gravidarum is practically unknown in Oriental countries (where diet is deficient according to our standards), except in industrialized Japan, and the incidence is low among Eskimos and native African tribes. Animals whose reproduction closely parallels that of women show no signs of vomiting during pregnancy[4, 6]. The success of placebo therapy[7, 8] lends support to the observation that a psychogenic factor is a complication of this syndrome, a point agreed upon by most physicians.

THE AUTHOR

Paul E. Craig, M.D., Tulsa, wrote "Use of an Anorexic Antidepressant in the Control of Nausea and Vomiting of Pregnancy." Doctor Craig graduated from North Central College, Napinville, Ind. and received his M.D. from Northwestern University. He served in World War II 32 months. Among medical organizations of which he is a member are the Aero Medical Association and the American Medical Writers Association.

II. Etiology

Numerous theories regarding the etiology of nausea and vomiting of pregnancy have been advanced, but as yet there has been no major agreement. An understanding of the etiology would be of great help in finding an effective cure. The very fact that so many different types of treatment are effective, though not always significantly, suggests that there may be a chain of causes. The major theories based on physiologic considerations are presented below.

A. Allergic Reaction

1. Hirst[9] and Finch[2] believe that the pregnant woman is allergic to the secretion of her own corpus luteum gravidatatis. The nausea and vomiting of pregnancy develop at the same time the corpus luteum reaches appreciable size and usually disappear at about the time the gland begins retrogressive changes. Cutaneous skin reactions following intradermal injections of progestin were directly proportional to the severity of nausea. Hirst and Finch also observed that a high percentage of patients exhibiting this syndrome gave a family history of allergy.

2. The theory of an allergic reaction to toxic substances of placental or fetal origin is advanced by Levy-Solal as quoted in Stander[1], and others[5, 10, 3]. Merkel[5] thinks

increased capillary permeability in the placental base facilitates the transfer of the toxic substance(s), while Dougray[10] believes an allergy to albumin exists as a result of toxic placental products, such as peptone, guanidine, and histamine liberated into the blood stream by the activity of trophoblast. The involvement of histamine was first proposed by Hofbauer in 1926 (as quoted in Dougray[10]). This theory has found support by Kapeller-Adler[11] and Koloszynski as reported in Fitzpatrick[3]. They found that while histidine-histamine excretion in nontoxemic pregnancies was normal, it was below normal in severe toxemic pregnancies. It is of interest that histamine applied directly to the vomiting center induces vomiting[3].

B. Endocrine Disturbance

1. Vanden Bosch[13] and Kemp[14] suggest that nausea and vomiting of pregnancy may be due to temporary depression of adrenal function. Hall[4] notes that nausea and vomiting are the first symptoms in adrenalectomized animals. Biochemical findings and the occurence of nausea and vomiting in hyperemesis and Addison's disease suggest some correlation. Adrenalectomized animals apparently are more vulnerable to toxins of all kinds than normal animals[14]. Kemp[15] explains insufficiency of adrenal cortex by the fact that chorionic gonadotropin is present in large quantities in the first trimester in order to maintain minimum secretion of progesterone necessary to prevent abortion. Actually an adrenal cortex hypertrophy exists at this time, presumably to secrete more cortin which is necessary to detoxify the excessive quantity of gonadotropin in the blood. When the gonadotropin concentration is sufficiently high, a relative corticoadrenal insufficiency may exist. Brindeau et al.[16] have attributed the vomiting of early pregnancy to the abnormally high concentration of the gonadotropic hormone itself.

2. Merkel[5] lists hormonal imbalance, especially estrogen-progesterone ratio, as a possible factor. It is known that a larger amount of progesterone is secreted in pregnant than in non-pregnant women.

3. Some writers have indicated that the thyroid and parathyroid glands are implicated in the nausea and vomiting of pregnancy.[1]

C. Nutritional Deficiencies and Hunger

Proper nutrition has an important bearing on the nausea and vomiting of pregnancy. The increased demand of the body during pregnancy may result in deficiencies. Vitamins are known to be necessary for the proper function of the body. For instance, evidence indicates that thiamine is essential for the intermediary metabolism of carbohydrates.[17] Berstein[18] believes it aids in oxidizing lactic and pyruvic acids, which in turn assist carbohydrate metabolism. Guhr[19] has observed that the thiamine blood level is uniformly low during pregnancy. Avitaminosis-B is thought to be an important factor by some investigators[4] because of the similarity of symptoms in severe hyperemesis and polyneuritis.

Indications are that pyridoxine is involved in the utilization of unsaturated fatty acids,[20] while normal cortico-adrenal function depends on cevitamic and pantothenic acids.[15]

D. Miscellaneous

The theory of Kotz reported in Stander[1] regards over irritability of the vagus. Stander also states that Seitz agrees partially but further suggests the occurrence of a reflex, psychic, or toxic vagal-stimulation caused by disturbance of inner secretions. Orr[22] and Fitzpatrick[3] suggest that achlorhydria may be a causative factor. Possibly achlorhydria permits toxic substances to form in sufficient concentration to stimulate the vomiting center.

Other theories are spasm of the second portion of the duodenum and probably decreased tone of pylorus and stomach,[23] and sensitivity to husband's semen.[24]

III. Therapy

Treatment of the nausea and vomiting of pregnancy has been as varied as the theories on etiology. It is difficult to evaluate results in many studies because as many authors have pointed out, some of the patients would have improved without therapy.

1. Corpus Luteum Extract

Finch[2] injected graduated doses of progestin in oil to desensitize nauseous patients to their own corpus lutem secretion and had "surprisingly good results." Hirst[9, 25] used corpus luteum extract both intramuscularly and intravenously in "hundreds of cases." In one study he reported success in 21/25

(84 per cent) patients after intramuscular injections of 1 cc. on alternate days for five to six doses.

2. Antihistamines

Dougray[10] treated 94 cases with Anthisan (0.1 Gm. b.i.d. to five-six times daily) or Phenergan (25 mg. t.i.d.) in an uncontrolled study, of which 87 per cent showed improvement or complete remission. Drowsiness which developed with both antihistamines was countered by 5 mg. amphetamine sulfate.

Cartwright's[7] results using Dramamine or a placebo in a series of 77 patients showed that Dramamine (100 mg. b.i.d.) afforded only about 10 per cent more protection than the placebo (59 per cent vs. 48 per cent) although the degree and rate of relief were greater. However, Carliner et al.[26] reported that Dramamine (100 mg. t.i.b.) was effective in 72 per cent of 43 cases. Nausea and vomiting returned in 10 patients for whom placebos were substituted unknown to them, but they were again controlled by readministration of Dramamine. Drowsiness was the most prominent side effect encountered in the Dramamine therapy. Some complained of vertigo and muscle tremors.

Finch[27] treated 27 cases with either Histadyl or Benadryl with success in 26 of them (96 per cent). He credits success to the counteraction of an allergic reaction to an unidentified hormone, probably from the corpus luteum. Lask,[28] using Anthisan or Avomine, obtained 86 per cent cure in 60 patients, while only 10 per cent of 60 patients on placebo were benefited.

3. Menadione-Ascorbic Acid.

Merkel[5] obtained complete remission within three days in 64/70 (91 per cent) cases of mild to severe nausea and vomiting after treatment with oral ascorbic acid (25 mg.) and menadione sodium bisulfite (5 mg.) in an uncontrolled study. No untoward side effects were noted, and prothrombin level and bleeding time remained normal. Neither compound used alone proved as effective. The rationale of this treatment was decreased capillary permeability.

4. Absorbent

Fitzpatrick[3] administered "Resion" (a polyamine anion exchange resin, synthetic sodium aluminum silicate, and synthetic magnesium aluminum silicate) to absorb toxic substances from the gastrointestinal tract. In the uncontrolled study of 25 patients 93 per cent were relieved.

5. Adrenal Cortex

In Germany synthetic adrenal cortical hormone administered to 27 patients with hyperemesis by Lange-Sundermann[29] brought prompt and effective relief. Vander Bosch[13] successfully treated a case with ACTH (20 mg. irregularly for four-five weeks) which was refractive to all other types of treatment. Kemp[14, 15] mentions a series of six patients successfully treated with adrenal cortical extract, and another of 200 similarly treated patients with 85 per cent success. Freeman et al.[30] effectively treated 76/78 (97 per cent) uncontrolled cases with adrenal cortex (oral or parenteral), and Bernstein[18] noted marked improvement or complete relief in 120 patients treated with superenal cortex and thiamine. Dorsey,[20] using pyridoxine (25 mg. intramuscularly) and suprarenal cortex (0.5 cc. intramuscularly) in an uncontrolled study, either greatly improved or cured 58/62 (94 per cent) patients after one, two, or three injections. Adrenal cortex therapy provided marked benefits in all 50 cases reported by Kotz and Kaufman.[31]

6. Novocain

In an effort to regulate hyperfunctioning of the sympathico-adrenal system, Paschen[32] administered a one per cent solution of novocain by infiltration to 23 patients with relief evident in all cses. Rouques[33] obtained excellent to good results with intravenous novocain in 85 per cent of 123 patients.

7. Sex Hormones

Although there has been widespread interest in the possible administration of sex hormones in treating nausea and vomiting of pregnancy, this has been advised against in a reply to a query to the editor of the *Journal of the American Medical Association.*[34] In the light of present knowledge, testosterone may cause hermaphroditism if it is given for nausea and vomiting before sex is determined. Estrogens in themselves are thought to cause nausea and vomiting, and their use in this connection is discouraged. Some authors have used diethylstilbesterol with good results, however. Bertling and Burwell[35] report only one failure in 31 patients given 5 mg. orally daily.

8. Parathyroid Extract

Sussman[36] reported good results with parathyroid extract in more than 80 cases.

9. Carbohydrates

Titus et al.[37] advocate the frequent intake of food high in carbohydrates, augmented by the oral administration of 10 per cent glucose and two per cent sodium bicarbonate solution. In severe cases they recommend intravenous injections of glucose. Serra[38] found that insulin combined with glucose gave favorable results, although Douglass[39] believes the use of insulin in conjunction with glucose is harmful. He recommends glucose to combat hypoglycemia, vitamins B and C, and normal saline subcutaneously to counteract dehydration. Stander[1] approves the use of glucose in severe cases combined with insulin to counteract severe acidosis which may occur during nausea and vomiting of pregnancy. Two severe cases of nausea and vomiting were relieved by intravenous injections of deproteinized honey.[40] Fitzgerald[41] advocates rest, proper diet, fluids for dehydration and glucose therapy.

Crunden and Davis[21] successfully treated 102/123 (83 per cent) patients with "Emetrol," a phosphorated carbohydrate solution, and observed no side effects. Of those receiving placebo therapy, 38/122 were relieved. Rice and Strickler[42] treated two cases of pernicious vomiting of pregnancy with intravenous solution containing invert sugar, amino acids, alcohol, and water, completely curing them in one-three days.

10. Vitamins-Nutrition

A high protein diet, proper outlook, ferrous sulfate, calcium, and vitamins are usually helpful treatment, according to a reply to a query in the *Journal of the American Medical Association.*[34] Carliner et al.[26] have used pyridoxine (oral and intravenous), oral thiamine, sedation, and psychotherapy. Stander[1] states that good results have been obtained with vitamin B complex, liver extract, and ascorbic acid.

Weinstein[43] reports that all 32 patients showed improvement after treatment with 50-100 mg. pyridoxine tri-weekly but that this should be considered adjunct therapy to proper diet and sedation. The effectiveness of pyridoxine was substantiated by Dorsey[20] in combination with suprarenal cortex, while Hesseltine[8] believes that pyridoxine therapy is without basis since he obtained as good results with a placebo as with pyridoxine in a small series. On the other hand, Hurlbutt[44] obtained complete remission in 77/80 (96 per cent) cases given 'Nidoxital' (nicotinamide, pyridoxine, dl-methionine, benzocaine, and pentobarbital sodium).

11. Anorexic Drugs

"Dexedrine" Sulfate (5 mg.) was effective in 90 per cent of 165 pregnant women with nausea and vomiting[45] and caused anorexia, elevation of mood, and alertness. Ascorbic acid tablets were substituted by Anspaugh in 148 of the cases, and of them only 13 remained free of symptoms. Slight nervousness noted was controlled by reducing dosage or the use of barbiturates. Crunden et al.[21] have also used this drug.

12. Miscellaneous

Anspaugh,[45] Cruden et al.,[21] and Irving as quoted in Douglass[39] have found the use of barbiturates helpful. Orr[22] used glutamic acid hydrochloride to counteract deficiency of free hydrochloric acid with good results. He reports that Roberts showed that caffeine stimulated gastric secretion and Arzt used this effect to treat nausea.

To relieve duodenal spasm and thus prevent vomiting of pregnancy, McGowan et al.[23] treated 12 patients with nitroglycerin, 1/10 gr. sublingually. Though other methods had failed, he obtained uniformly good results in all patients within two days. The only side effect noted was a brief and transient headache.

Other therapies reported by Stander[1] are desiccated placenta to speed up oxidation of partially split products in the blood stream, luminal, calcium, and bromides, none of which have proved very satisfactory.

Kroger and DeLee[46] reported complete relief by hypnosis in 17/19 (90 per cent) cases of nausea and vomiting of pregnancy. Their hypothesis was that this treatment may raise the vomiting threshold.

The Oxytocic Action of Dextra- Amphetamine

Studies on the direct effect of dextroamphetamine sulphate on the uterus, both in animals and in human beings, indicate that the drug, in higher concentrations, stimulate the uterine masculature, causing an increase in tone and often, though not consist-

ently, a corresponding increase in amplitude of contraction. This result was produced in both the pregnant and non-pregnant isolated animal uteri. However, these stimulatory effects were produced by comparatively large amounts of the drug—the subcutaneous injection of 50 mg. of the drug in human beings, and by concentrations greater than 1:100,000 in the isolated animal uterus. Lower concentrations had little or no effect.

Clinical Application and Results

Dexamyl (a light green, creased, heart-shaped tablet) was administered with 10 grains of sodium bicarbonate (a light green, unscored tablet) to 86 women during the first trimester of pregnancy. The first medicament invigorated the patient without nervous excitation, decreased their appetite, and allayed depression. The second served solely as a placebo.

All of the 86 women complained of nausea either in the early morning or during the course of the day when meals were served. Each was given both tablets simultaneously 30 minutes before meals. Of the 86 patients treated, 78 or 90 per cent were entirely relieved of their symptoms. Five were definitely improved and three were unrelieved. Dexamyl was then withdrawn for seven days, but the sodium bicarbonate placebo was continued. Nausea or vomiting reappeared in 74 of the 86 patients. Dexamyl was again administered to the 74 women who were nauseated, and the placebo was withheld. Sixty-eight of them again became asympotomatic in three days, and six were admittedly relieved. The entire group of 86 showed marked improvement at the end of 10 days when both the placebo and Dexamyl were again prescribed. Continuation of this therapy for 90 days resulted in a complete absence of symptoms in 74 of the 86 patients, partial relief in 10 and little or no benefit in two of the patients under observation.

Summary

1. The data presented suggest that the basic cause of nausea and vomiting of pregnancy might be a change in balance of certain endrocrines, which results in many of the condition discussed under etiology. By treating only one of the conditions, one may obtain relief in a number of patients. Therapy with a drug which lowers the responses of the vomiting threshold may also afford relief of symptoms. None of the methods of therapy reported has thus far been successful in all patients. There is still an obvious need for more research, in hope of finding a drug that will be beneficial in all cases of nausea and vomiting of pregnancy.

2. Dexamyl, in a controlled study of 86 patients, proved definitely beneficial in treating nausea and vomiting of pregnancy. Seventy-four out of 86 women (85 per cent) became asymptomatic in 90 days. Withdrawal of dexamyl resulted in a return of symptoms in 68 cases. The placebo was accredited with some psychologic, therapeutic effect in 16 patients, and two were not relieved by either the placebo or dexamyl. No incident of pernicious vomiting was encountered in this series.

Conclusions

1. Nausea and vomiting of early pregnancy is a symptom-complex without demonstrable, underlying pathology; therefore, no single drug has to date been completely successful in its management.

2. Dexamyl was 85 per cent effective in the control of nausea and vomiting of pregnancy. It exhibited additional merit in surpressing the appetite and creating a sense of well-being, without the side effect of nervous excitation.

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Acute Postoperative

PSEUDOMEMBRANOUS ENTEROCOLITIS

LEO LOWBEER, M.D., F.C.A.P.

THE AUTHOR

Leo Lowbeer, M.D., Tulsa, is the author of "Acute Postoperative Pseudomembranous Enterocolitis." Dr. Lowbeer attended Austrian State College and was graduated from the University of Vienna School of Medicine. He is pathologist and director of laboratories at Hillcrest Hospital in Tulsa. Doctor Lowbeer is a member of the Society for Experimental Biology and Medicine and the Oklahoma Association of Pathologists.

In recent years increasing attention is being paid to the so-called postoperative pseudomembranous enterocolitis (p.p.e.), an infrequent, but very serious, usually fatal, and almost invariably unrecognized complication of operations, predominantly abdominal in character[6]. It also may occur in cardiac and debilitated patients and in nonoperated cases of intestinal obstruction[9, 10].

The clinical findings are those of abdominal tenderness and distention, at first without peritoneal irritation, followed by nausea, vomiting and usually diarrhea, fever, leucocytosis, dehydration and blood electrolyte loss, and associated severe cardio-vascular collapse. These symptoms start three to four days after the operation and usually terminate in death within one week. The pathologic findings are those of necrotizing enteritis with superficial membranes covering the mucosa, involvement of various or all portions of small and large intestines, dilatation of the lumen with liquid nonbloody feces, and with or without peritoneal involvement[2, 5, 9, 10, 11, 13, 14, 16, 19].

The etiology is still obscure. Penner and Bernheim[11] in 1939 reviewed the literature dating back to 1893 and on the basis of 40 cases of their own considered postoperative shock to be responsible for the necrosis of the intestinal mucosa. They quote much experimental evidence to that effect. Penner and Druckerman[12] reiterated these findings in 1948. Later observers such as Dixon and Weismann[5] feel that shock while always present is the consequence rather than the cause of the disease. In recent years, antibiotic elimination or disturbance of the normal intestinal bacterial flora with overgrowth of certain bacteria, particularly staphylococci, has been accused of being responsible and it has been felt that the disease has been increasing in frequency since the antibiotic era[2, 16, 19].

The known facts do not justify these conclusions. In the first place, the disease has been known long before the antibiotic era[9, 10, 11, 12, 13, 14, 15]. Between 1893 and 1939 at least 155 cases have been reported. Statistics of the Mayo Clinic (Pettet et al,[13, 14]) show 45 cases in the 14 years between 1925 and 1938 and 49 cases in the years between 1939 and 1952, indicating that there has been no increase since the introduction of the broad spectrum intibiotics.

Bacteriologic studies in the past have been incomplete and limited to a search for pathogenic enteric organisms such as shigella and salmonella which were never found. If properly conducted, however, abnormally prevailing organisms, probably pathogenic for the intestine, are found, varying from case to case. Among these staphylococci are frequently prominent[2, 3, 4, 19] and are accused by some to be the primary cause[19], by others to be secondary invaders. Also found are pseudomonas aeruginosa, proteus vulgaris, and absence or diminution of coliform organisms[16].

It is of course well known that such prevailing organisms may be found in the stool of many patients with or even without harmless diarrhea, after antibiotic treatment. Their role as secondary invaders upon previously damaged or necrotic mucosa is certainly indisputable, but for the reasons given it is doubtful that they are responsible for the disease under discussion.

We personally conducted postmortem examinations on seven fatal cases of pseudomembranous enterocolitis between 1942 and 1953 occurring three times after appendectomy, once after ileostomy for ulcerative colitis, once after prostatectomy, once after repair of diaphragmatic hernia, and once after diabetic coma complicated by septicemia. Careful search of the clinical records revealed marked blood pressure drops in each case some time *before* the onset of ab-

dominal symptoms, *as well as a second blood pressure drop* associated with the disease itself. One case interestingly enough was associated with extensive pancreatic necrosis known to occur in severe stress with shock syndromes[1, 7, 17, 18, 20], such as after burns, incompatible blood transfusions, prostatectomy, thyroidectomy, and experimentally. In one of our cases pseudomonas aeruginosa, in another case beta hemolytic streptococci, Lancefield A, and in other cases staphylococci were found as predominant organisms in the diarrheic feces.

On the basis of these observations as well as of a study of the literature, it is felt that the following mechanisms may be involved in the etiology of pseudomembranous enterocolitis: The primary mucosal necrosis of the intestine may represent the tissue break down observed in severe stress and shock with poor adrenal response. This has been observed experimentally as well as in patients, manifesting itself in gastric erosions; Curling's duodenal ulcers in burns; necrosis of intestinal mucosa and pancreas, and is related to intense autonomous discharges in the splanchnic area with peristaltic, vasomotor and secretory reactions (Selye[18]).

The primary mucosal necrosis may also be caused by an allergic inflammation (antibody-antigen reaction) with bacteria possibly constituting the antigen. One of our patients had a known allergy to adhesive tape. At any rate, there is much evidence to suggest a poor response to stress. In this connection it is interesting to note, that in a series of eight autopsies of fatal cases of p.p.e. Terplan[19] found marked lipid depletion of the adrenal cortex in all.

Secondly, this primary mucosal necrosis is maintained or increased by pathogenic organisms colonizing on a necrotic mucosa and often rampant because of antibiotic elimination of the otherwise predominant coliform organisms. The remaining bacteria are characteristically resistant to the antibiotics used in a given case.

Based on their own material of seven cases and similar conclusions, Prohaska and co-workers[15] successfully treated three patients suffering from this disease with corticotropin. All survived. Four previous patients not so treated died. The diagnosis was made in one case by sigmoidoscopy, a most promising diagnostic tool, in another case by exploratory laparotomy and in the third case was based on clinical findings. These authors also repudiate the bacteriologic etiology of the disease on the excellent ground that if bacteria would primarily cause the intestinal necrosis, corticotropins would tend to spread the infection rather than eliminate it. Since the publication of this important paper, a patient in this hospital was treated with corticotropin and survived.

The treatment of this disease should therefore consist of corticotropin, combined with effective antibiotic therapy based on thorough cultural stool studies. In cases where staphylococci are predominant, erythromycin or sulfasuxidine may be the drug of choice. In addition, restoration of the greatly disturbed electrolyte and water balance and vigorous anti-shock treatment with blood transfusions is necessary[8].

Those physicians who have seen this disease in the living and the dead patient, will never forget to consider it when another similar case comes along. Those who have not seen it are urged to acquaint themselves with this entity and its treatment.

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Association Activities

PRESIDENT'S LETTER

At a recent social function of an eastern Oklahoma county medical society, my faith in the future of medicine was strengthened. This came about very simply, through a conversation with a young practitioner in that area.

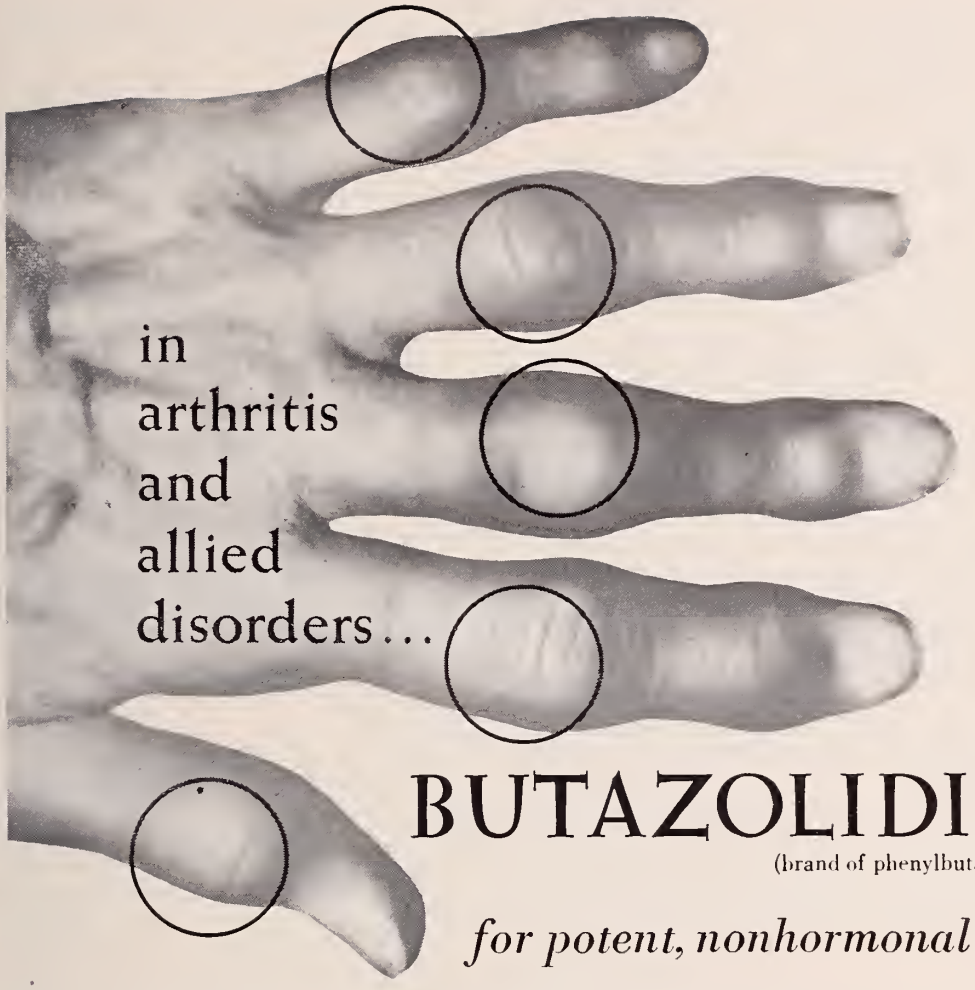
In recent years we have all heard entirely too much about young doctors who are not satisfied to practice in small towns; those who want office hours only on Mondays, Wednesdays, and Fridays, and no night work; and those who seem to expect to own two cars and a big house after no more than three years of practice. It was, therefore, very gratifying to find a young man, who is a graduate of the Oklahoma University School of Medicine, and who has served one year of internship, practicing in a small town and loving it. He is dedicated to the service of his patients and has made the financial consideration of his practice entirely of secondary importance.

Later, in talking with some of his colleagues, I found that this young doctor is highly respected by the people in his community, and is carrying on a superior type of practice. He is not having any financial difficulties.

It is time that many of us should re-evaluate our standards and rededicate ourselves to the fundamental purpose of medicine. Our only reason for existence as a group or as individual doctors is to be of service to those who are ill.

Bruce R. Harrison

President



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Oklahoma Academy of General Practice Invite Physicians to Meeting

All Oklahoma physicians are invited to attend the Seventh Annual Meeting of the Oklahoma Academy of General Practice to be held in Oklahoma City February 14-15 at the Biltmore Hotel.

Six out of state guest speakers will present two scientific papers each and W. B. Hildebrand, M.D., President of the American Academy of General Practice from Menasha, Wisconsin will make the address at the annual dinner Monday night.

Roundtable luncheon will be held both days and a symposium on rehabilitation is planned for Monday afternoon, February 14. The traditional complimentary breakfast for all physicians attending and their guests is scheduled for Tuesday morning, February 15, with the annual business session to immediately follow the breakfast.

The complete scientific program is as follows:

Monday

9:30-10:00—*Andrew L. Banyai, M.D.*, Wauwatosa, Wisconsin—"Pointers on the Diagnostic Significance and Treatment of Cough"

10:15-10:45—*Daniel C. Moore, M.D.*, Seattle, Washington—"Regional Block in Obstetrics"

11:15-11:45—*James W. Burks, Jr., M. D.*, New Orleans, La.—"Dermatoses of the Hands"

12:00-1:15—*Roundtable Luncheon*

1:30-3:15—*Symposium on Rehabilitation*

3:30-4:00—*Fred R. Harper, M.D.*, Denver, Colorado — "Emergency Treatment of Chest Injuries"

4:00-4:30—*Robert M. Myers, M.D.*, Kansas City, Missouri—"Infertility"

4:30-5:00—*Paul C. Laybourne, M.D.*, Kansas City, Kansas—"Treatment of Common Emotional Problems of Children"

6:30—Social Hour and Dinner

Tuesday

7:30-9:00—Breakfast

9:00-10:00—Annual Business Meeting

10:00-10:30—*Paul C. Laybourne, M.D.*, Kansas City, Kansas—"Preventive Child Psychiatry"

10:30-11:00—*Andrew L. Banyai, M.D.*, Wauwatosa, Wisconsin—"The Etiology and Treatment of Pulmonary Hemorrhage"

11:00-11:30—*Daniel C. Moore, M.D.*, Seattle, Washington — "The Treatment of Nerve Block of Pain Associated with the Every Day Curable Diseases"

12:00-1:30—*Roundtable Luncheon*

1:45-2:15—*James W. Burks, Jr., M.D.*, New Orleans, La.—"What's New in Dermatology"

2:30-3:00—*Fred R. Harper, M.D.*, Denver, Colorado — "Differential Diagnosis of Lung Tumors"

3:15-3:45—*Robert M. Myers, M.D.*, Kansas City, Missouri—"The Routine Multipara"

3:45—"Removal of Scars by Abrasion" (Movie)—*James W. Burks, Jr., M.D.*

Excused Absence

Oklahoma State Medical Association delegates and officers take their work seriously and, like the famed postman, always attempt to get through to their destination regardless of weather. This was proved recently by the following letter from C. M. Hodgson, M.D., Kingfisher, Vice-Councilor of the Third District, dated Sunday afternoon, December 12, 1954, the day of the mid-winter House of Delegates session.

"I did not arrive at the House of Delegates meeting. Sunday morning about 8:45 a.m., north of Okarche, my car slipped on the icy pavement, turned around twice and deposited us in the ditch. This was ample. Getting back on the highway, I started back home. About a mile up the road, I came upon a car upside down in the ditch. A man and woman unhurt were standing by. It was Delegate Dr. H. A. Masters and Mrs. Masters of Tahlequah. I returned them to Kingfisher and aided them in making preparations for their return home.

"Organized medicine was in action up this way Sunday morning. All's well that ends well, this did!"

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the pedigreed hearing aid.

Deaths

B. F. Johnson, M.D.
1873-1954

B. F. Johnson, M.D., pioneer Fairview physician, died November 28 following a cerebral hemorrhage.

Doctor Johnson practiced in Fairview 50 years until his retirement in 1945. Born near Leighton, Ala., he attended the Leighton Academy and was an 1898 graduate of the University of Nashville. He came to Fairview in 1901. He was active in the Masonic lodge, Guthrie consistory, and in the Presbyterian church. He served two terms as mayor of Fairview and was a charter member of the Rotary club of that city.

He is survived by two daughters, a sister and two grandchildren.

Floyd E. Warterfield, M.D.
1870-1954

Floyd E. Waterfield, M.D., Muskogee urologist, died November 11 after a long illness.

He was born August 2, 1870 at Harrison, Arkansas and received his medical degree from Arkansas University. He later studied at New York Polyclinic, Johns Hopkins, and in New Orleans and St. Louis. Doctor Warterfield began the practice of medicine in Holdenville in 1900 and moved to Muskogee in 1910. He served in the medical corps during World War I.

Doctor Warterfield was an honorary member of the Oklahoma State Medical Association and of the American Urological Association. He had also received a 50 year pin. He was active in the Masonic lodge.

Doctor Warterfield is survived by his widow of the home, one son and one brother and two grandchildren and one great grandchild.

B. E. Dozier, M.D.
1896-1954

B. E. Dozier, M.D., known as Shidler's "flying physician" because of his plane which he used for house calls and to transport patients to the hospital, died November 24 at his home following a heart attack.

Doctor Dozier was born March 6, 1896, at Richmond, Kentucky, and graduated from the University of Oklahoma School of Medicine. He began practice at Lyman during the booming Burbank oil field days and later practiced at Webb City, Mo., before coming to Shidler, 17 years ago. He was a veteran of World War I.

Survivors include his wife, one daughter, three brothers and two sisters.

John Benjamin Clark, M.D.
1874-1954

J. B. Clark, M.D., Coal County physician for more than 50 years, died November 16, 1954, after several weeks illness.

Doctor Clark, a life member of the Oklahoma State Medical Association, came to Coalgate in 1902 from Corsicana and Dallas, Texas. He was born September 27, 1874, in Rockwall, Texas and graduated from Tulane University.

He was active in civic affairs in Coalgate and was largely responsible for several modern city improvements. He had served as mayor and alderman several times. During World War I, he was in the army medical corps.

Survivors include the widow of the home address, one son, a daughter, one brother and one sister and three grandchildren.

C. A. Johnson, M.D.
1881-1954

C. A. Johnson, M.D., Ardmore died December 19 after a long illness.

Doctor Johnson was born August 27, 1881 at Barry, Ill. and graduated from the University of Missouri and Rush Medical College. He practiced at Wilson for 25 years and was a former mayor there. He moved to Ardmore in 1944. Doctor Johnson was a member of the Rotary Club, American Legion, and Shriner.

His wife, one sister and two grandchildren survive.

Gerald C. Mullins, M.D.
1887-1954

Gerald C. Mullins, M.D., Broken Bow, died December 19.

Doctor Mullins had resided at Broken Bow for the past four years, having moved there from Albuquerque, New Mexico. He was a member of the First Christian church.

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Typhus Fever
Sinusitis
Gonorrhea
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Bronchopulmonary Infection
Acute Pyelonephritis
Chronic Pyelonephritis
Mixed Bacterial Infections
Soft Tissue Infections
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In addition to its true broad-spectrum activity, ACHROMYCIN provides more rapid diffusion than certain other antibiotics, prompt control of infection, and the distinct advantage of being well tolerated by most persons, young and old alike.

ACHROMYCIN, in its many forms, was accepted by the medical profession in an amazingly short time. Each day more and more prescriptions for ACHROMYCIN are being written when a broad-spectrum antibiotic is indicated.

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Ten Top Scientific Speakers, AMA President-Elect To Be Featured At Annual Meeting

Ten nationally known medical personalities have accepted invitations to appear as visiting distinguished guest speakers at the 62nd Annual Meeting of the Oklahoma State Medical Association in Tulsa, May 9-11, 1955.

Waler E. Brown, M.D., Tulsa, Chairman of the Scientific Work Committee, anannounced last month that the program was virtually complete and said the following guest speakers would each present one or more papers.

Walter C. Alvarez, M.D., Internal Medicine, Professor of Internal Medicine, University of Illinois School of Medicine, Chicago, Illinois.

George Crile, Jr., M.D., Surgery, The Cleveland Clinic, Cleveland, Ohio.

Juan A. del Regato, M.D., Radiologist, Director of the Penrose Cancer Hospital, Colorado Springs, Colorado.

Charles H. Houston, M.D., Internal Medicine, Excter, New Hampshire.

John J. Parks, M.D., Obstetrics & Gynecology, George Washington University School of Medicine, Washington, D.C.

William W. Scott, M.D., Urology, Chairman of the Department of Urology, Johns Hokpins University School of Medicine, Baltimore, Maryland.

William A. Sodeman, M.D., Internal Medicine, Chairman and Professor of the Department of Medicine, University School of Medicine, Columbia, Missouri.

James K. Stack, M.D., Orthopedic Surgery, Associate Professor of Orthopedic Surgery, Northwestern University School of Medicine, Chicago, Illinois.

Arthur Purdy Stout, M.D., Pathology, Professor of Surgical Pathology, Columbia University College of Physicians and Surgeons, New York, N.Y.

A tenth speaker, who will appear at the House of Delegates meeting of Sunday, May 8, 1955, will be Elmer L. Hess, M.D., of Erie, Pennsylvania, President-Elect of the American Medical Association.

Doctor Brown said that an eleventh guest speaker would be selected in the field of Pediatrics.

The convention will again be at the beautiful Cimarron Ballroom of Tulsa, located just one block from the Mayo, headquarters hotel. Physicians are urged to write at once for hotel reservations to the Hotels Committee, Tulsa County Medical Society, B9 Medical Arts Building, Tulsa. Do not write hotels direct as all reservations received by the hotels will be forwarded to the Hotels Committee. Rooms will be allocated on the basis of earliest arrival. Doctors requesting accommodations should state date of arrival, date of departure, type of accommodation desired, and preferred hotel (Mayo, Tulsa, Adams, Alvin, Bliss). A confirmation will be mailed later by the Hotel.

Features of the convention will include scientific and commercial exhibits, roundtable luncheons, the President's Inaugural Dinner Dance on Tuesday, May 10, 1955, featuring a name dance band, a special program for the Auxiliary to the Oklahoma State Medical Association, and a complimentary dinner and program on Monday evening, May 9, 1955, tendered by the Blue Cross-Blue Shield Plans of Oklahoma.

In addition to papers by visiting guest speakers, the scientific program will include papers by members of the Oklahoma State Medical Association. The program has now been completed and no more papers can be accommodated due to time limitations. Doctors wishing to present scientific exhibits should write for application blanks at once to the Convention Committee, Oklahoma State Medical Association, B9 Medical Arts Building, Tulsa, Oklahoma.

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1. American Medical Association: New and Nonofficial Remedies. J. B. Lippincott Co., Philadelphia, 1954, p. 147.

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Medical Societies Around the State

Garfield-Kingfisher

Mark D. Holcomb, M.D., was elected president of the Garfield-Kingfisher County Medical Society at a recent meeting. Other officers are George T. Ross, M.D., vice-president; and R. C. Baker, M.D., secretary.

Oklahoma

Elmer Ridgeway, Jr., M.D., outgoing secretary, was named president-elect of the Oklahoma County Medical Society at a recent meeting. 1955 president is Don Branham, M.D.; J. W. Records, M.D., vice-president; and M. M. Appleton, M.D. is secretary-treasurer.

Woods-Alfalfa

T. D. Benjegerdes, M.D., Alva, has been elected president of the Woods-Alfalfa County Medical Society. C. L. Benson, M.D., Cherokee, is vice-president and A. B. Hinkle, M.D., Alva, was named secretary-treasurer.

Grady-Caddo

Onis Hazel, M.D., Oklahoma City dermatologist, was guest speaker at a recent meeting of the Grady-Caddo County Medical Society. Life memberships were presented to several physicians at the meeting (see picture this page).

Tulsa

Newly elected president-elect of the Tulsa County Medical Society is F. L. Flack, M.D. Other 1955 officers are Frank J. Nelson, M.D., president; Hugh C. Graham, vice-president; and R. M. Wadsworth, secretary-treasurer.

Northwestern Society First to Report Dues

M. C. England, M.D., Woodward, Secretary of the Northwest Counties Medical Society, has set an enviable record as a county society secretary.

On December 17, 1954, Doctor England forwarded to the O.S.M.A. Executive Office a check for $1,474.00 for dues making that county society 100 per cent paid up for 1955. Doctor England also enclosed a list of all 1955 officers for his society. Northwestern was the first county society to remit 1955 dues for the entire membership.

Tri-County

Charles Taylor, M.D., Oklahoma City, was guest speaker at a meeting of the Tri-County Society held recently in Idabel.

Creek

1955 officers of the Creek County Medical Society are J. W. Rentfrow, M.D., president; Thomas D. Burnett, M.D., Sapulpa, vice-president; and Richard Bakken, M.D., Bristow, secretary-treasurer.

Pittsburg

S. L. Dakil, M.D., was named president-elect of the Pittsburg County Medical Society. President is Bruce Brown, M.D., and secretary is Homer Wheeler, M.D.

Blaine

Elmer Hess, M.D., president-elect of the American Medical Association, was guest speaker at a meeting of the Blaine County Medical Society held in Watonga recently.

Wilkie D. Hoover, M.D., President of the Tulsa County Medical Society, presents a 50 Year Pin from the Oklahoma State Medical Association to Onis Franklin, M.D., Broken Arrow, on the occasion of his completion of 50 years in the practice of medicine. The presentation was made at the Society's meeting December 13. Doctor Franklin was similarly honored early in December by his alma mater, the University of Tennessee School of Medicine. He entered practice at Broken Arrow in 1904 and in 1941 built the Broken Arrow Hospital. He is the father of Samuel E. Franklin, M.D., of Tulsa.

Left to right: B. B. McDougal, M.D., Chickasha, President of the Grady County Medical Society A. E. Hennings, M.D., Tuttle; and H. M. McClure, M.D., Chickasha, Councilor, District 13. Doctor Hennings received an O.S.M.A. Life Membership. Also awarded Life Memberships in absentia at the meeting were C. B. McMillan, M.D., Gracemont (now deceased) and W. L. Bonnell, M.D., Chickasha.

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in 5 Gm. and 20 Gm. tubes

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O.U. School of Medicine Announce Postgraduate Courses

NEWER KNOWLEDGE OF THE THYROID IN HEALTH AND DISEASE—February 17.

Panel: *Leonard Eliel, M.D., Robert Howard, M.D., Henry Turner, M.D.*
Stewart Wolf, M.D., Moderator

CANCER OF THE BREAST—February 18 and 19

Program to begin at 1:30 p.m. on February 18

Guest Speakers:

LAUREN ACKERMANN, M.D., Pathologist, St. Louis

CUSHMAN D. HAAGENSEN, M.D., Surgeon, New York

MAURICE LENZ, M.D., Radiologist, New York

F. JOHN LEWIS, M.D., Surgeon, Minneapolis

Sponsoring organizations which will hold meetings in conjunction with the course:

Oklahoma Chapter of American College of Surgeons

Oklahoma Association of Pathologists

Oklahoma Association of Radiologists

All physicians interested in problems of breast malignancies are urged to attend.

APPLIED ANATOMY OF INTERNAL MEDICINE—

Begins February 15

A deeper understanding of recent advances in the field of internal medicine is possible only on the basis of a sound grasp of fundamentals. While this has always been clear as far as physiology and biochemistry is concerned, the need for familiarity with broader aspects of anatomy has only lately been recognized by general practitioners and internists. Consequently, interest has been awakened in anatomical features having bearing on pulmonary, cardiovascular, gastro-intestinal, biliary and neurologic pathology. The course intends to supply this information. It will consist of ten consecutive evening meetings and will be taught by Dr. Ernest Lachman, Professor and Chairman, Department of Anatomy and Dr. Garman H. Daron, Professor of Neuroanatomy.

ENDOCRINOLOGY—March 3, 4, and 5

A three day course is scheduled by the Department of Medicine. Problems of interest in the fields of Endocrinology will be stressed. This course will be of great benefit to those in internal medicine as well as the general practitioners.

ELECTROCARDIOGRAPHY — March 7 Through March 12

The course consists of informal lecture presentations which assume no formal acquaintance with the subject and which emphasize the physical basis of the subject. Laboratory exercises are carried out by the participants with individual help from the instructors. All working materials are furnished including a lecture notebook with figures and ECG's to eliminate note taking and permit study in advance of lectures. Participants are expected to attend all lectures and laboratory periods and remain the entire time scheduled.

EYE, EAR, NOSE AND THROAT—March 17 and 18

The Oklahoma City Academy of Ophthalmology and Otolaryngology have chosen these dates for their annual course and meeting. An interesting program is planned during the above two days featuring as guest speakers Doctors Peter Kronfeld, Ophthalmologist from Chicago, Illinois and Doctor Albelt C. Stutsman, Otolaryngologist of St. Louis, Missouri. There will be a dinner meeting Friday night, March 18, followed by a paper given by each of the guest speakers.

Registration will be limited to Ophthalmologists and Otalaryngologists and their guests.

TRAUMA—April 1 and 2

The Department of Orthopedic and Fracture Surgery and the Regional Committee on Trauma of the American College of Surgeons will conduct a course on Trauma featuring a guest lecturer prominent in this field.

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Have You Heard?

R. E. SAWYER, M.D., Durant, was recently presented a Masonic 50 year pin.

M. L. HENRY, M.D., McAlester, spoke on "Health and Safety" at a McAlester Business and Professional Women's club meeting.

J. R. HINSHAW, M.D., Norman, and FELIX M. ADAMS, M.D., Vinita, were among the Oklahomans recently inducted into the Oklahoma Hall of Fame.

W. R. COLLINS, M.D. has joined the Leslie-McCauley Clinic in Okmulgee.

A. L. BUELL, M.D., Okmulgee, has been named the regional representative of the American College of Surgeons.

W. B. CATTO, M.D., El Reno, was recently honored by the Veterans of Foreign Wars of El Reno and was presented a pen and pencil set.

LT. WALLACE N. DAVIDSON, JR., has returned to the States and is now stationed at Tinker Field in Oklahoma City.

THOMAS D. HOWARD, M.D., has recently been released from the air force and has opened his office in Idabel.

G. M. HOGABOOM, M.D., has moved from Heavener to Hot Springs, Ark.

E. W. KING, M.D., is the chief of staff of the new Bristow Memorial Hospital. FRANK H. SISLER, M.D., also of Bristow, has closed his hospital he has operated for 26 years, now that the new hospital is open.

LORETTA ENGLES, M.D., and MURIEL HYROOP, M.D., both of Oklahoma City, were among the Oklahoma City women featured in a newspaper article concerning professions for women.

J. L. WHARTON, M.D., has moved from Depew to Sulphur where he will be staff physician at the Oklahoma War Veterans Home.

CHARLES A. CASHMAN, M.D., formerly of Tulsa, has opened his offices in Shidler.

R. Q. ATCHLEY, M.D., Tulsa, was recently given special recognition in his home town of Lebanon, Mo., at a dinner meeting of his friends, family and former classmates.

C. A. TRAVERSE, M.D., Alva, spoke on "New Horizons in Medicine" at the Alva Kiwanis club recently.

LAWRENCE WILLIAMSON, M.D., has recently moved from Lindsay to Walters.

Press Association Explains Ethics

In a bulletin sent to its members, the Oklahoma Press Association made the following explanation concerning the medical ethics on advertising and publicity:

"Discussion continues whenever representatives of the press meet spokesmen for medical groups and "ethics" and "codes" are quoted by all professional groups from M.D.s to members of the fourth estate. The following is taken from the official "Principals of Medical Ethics of the American Medical Association" and is given to guide reporters and editors in what the A.M.A. recommends to its members."

Following the explanatory paragraph the Press Association reprinted Sec. 4 on "Advertising" and Sec. 5 on "The Relationship of the Physician to Media of Public Information."

Postgraduate Courses

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April 4-9, 1955
CLINICAL MANAGEMENT OF EMOTIONAL PROBLEMS IN CHILDREN (Registration limited)

June 2-3, 1955
SIXTH ANNUAL COLORADO INTERN AND RESIDENT CLINICS

June 10, 1955
COLORADO MEDICAL ALUMNI CLINICS

June 13-17, 1955
FUNDAMENTAL ADVANCES IN INTERNAL MEDICINE

July 11-15, 1955
CLINICAL HEMATOLOGY
(Registration limited)

July 14, 15, 16, 1955
POSTGRADUATE SEMINAR IN OPHTHALMOLOGY

July 25-28, 1955
DERMATOLOGY FOR GENERAL PRACTITIONERS

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HYDROCORTONE is a practical long-term therapeutic measure in the majority of patients suffering from rheumatoid arthritis. The use of small doses of HYDROCORTONE in conjunction with conservative general measures will permit the safe management of these arthritics for prolonged periods of time. Such a program has been shown to provide moderate to great relief in a very high percentage of patients.[2] In severely handicapped people, HYDROCORTONE plus physical therapy will frequently allow the rehabilitation of arthritics who would not be helped appreciably by either measure alone.[3]

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REFERENCES: 1. Boland, E. W. and Headley, N. E., *J.A.M.A.* **148**:981, March 22, 1952. 2. Ward, L. E., Polley, H. F., Slocumb, C. H. and Hench, P. S., *J.A.M.A.* **152**:119, May 9, 1953. 3. Snow, W. B. and Coss, J. A., *N.Y. State J. Med.* **52**:319, Feb. 1, 1952.

Book Reviews

A DOCTOR TALKS TO WOMEN. By Samuel Raynor Meaker, M.D. Cloth $3.95. Pp. 231 with 12 illustrations. Simon and Schuster, New York. 1954.

This book is written in an entertaining style interspersed with pleasing humor and containing numerous interesting personal experiences. The book, of course, is written so that it can be easily understood by the average intelligent woman and man. Examples of the subject matter can be illustrated by the Chapter titles, such as Capter I, "The Womb and The Woman"; V, "The Change of Life"; X, "Fertility and Sterility"; XIII, "The Sex Relation"; XIX, "Cancer".

The well-informed patient is much easier to treat. Some psychosomatic problems and fears resulting from ignorance would be corrected by reading this book. The book will also encourage consultation with a doctor when problems arise.

This is a book I am recommending to my patients. Dr. Meaker in his thirty years of gynecological practice has observed that women should and do desire to know more about themselves. The popularity of medical articles in the magazines and newspapers clearly demonstrates the great desire upon the part of the public to increase its knowledge of medicine. He has assembled in one volume the information most wanted by women about the special ailments of their sex in an accurate and complete treatise.

—A. N. Vammen, M.D.

A DOCTOR TALKS TO WOMEN. By Samuel Raynor Meaker, M.D. Cloth $3.95. Pp. 231 with 12 illustrations. Simon and Schuster, New York. 1954.

It is gratifying that a very intelligent man and doctor, such as Samuel Raynor Meaker, M.D. asks women to learn more about themselves. At a time when women are accepting professional and community responsibilities, as well as their duties concerning children and home, and are gaining knowledge in other fields, they must pause and learn more about themsevles as women. In short, "A Doctor Talks to Women" is a comprehensive piece of writing covering the whole reproductive and health normalities and problems of women. The style of the author is easy to read. The subtle bits of humor in its are both surprising and rewarding. The book is written (unlike the writings of many doctors) so that the average intelligent woman can understand it. The chapters on "Fertility and Sterility" and "The Mind Can Influence the Body" are particularly outstanding. I would recommend it to every woman to read. As a matter of fact, I would recommend it to every *man* to read. Certainly, if Dr. Meaker, as talented as he is, had written the same book with the same chapters, sentences and words in it and called it "A Doctor Talks to Men About Women" it would have been a best-seller.

Hazel Beeker Vammen, B.A. (Journalism)

Washington's Birthday Clinic

The Oklahoma City Internists' Association will hold its 22nd annual Washington's Birthday Clinic Tuesday, February 22, 1955. The meeting will be held in Room 8E, Out-Patient Building at the University of Oklahoma School of Medicine.

NOTE: All physicians who are members of their County Medical Societies are cordially invited to attend this meeting. No fees will be charged.

Program

10 a.m. to 12:30 p.m.

"Acute Renal Insufficiency," James F. Hammersten, M.D.

"Current Problems in Antibiotic Therapy," Thomas H. Haight, M.D.

"Clinical Aspects of Some Mediastinal Tumors," John M. Carey, M.D.

"Managing the Acutely Disturbed Patient," Coyne H. Campbell, M.D.

"Newer Insulins," Kelly M. West, M.D.

"Survey X-rays of the Abdomen," Bert E. Mulvey, M.D.

Luncheon for guests and members—Dining room of The Oklahoma Medical Research Foundation.

2:00 p.m. to 4:00 p.m.

"Hemoglobin C Disease; Other Disarrangements of Hemoglobin," Robert M. Bird, M.D.

"Experiences With the L-E Phenomenon in Arthritic Patients," J. N. Owens, M.D.

"Newer Drugs in Control of Hypertension," William Best Thompson, M.D.

"Clinical-Pathological Conference," William W. Rucks, Jr., and Hugh Stout, M.D.

A.M.A. House of Delegates Discuss Problems Ranging From Doctor Draft to Geriatrics

Geriatrics, medical ethics, internships, grievance committees, hospital accreditation, osteopathy, the doctor draft law, state-subsidized medicine and malpractice insurance problems were among the major subjects of discussion and action by the House of Delegates at the American Medical Association's Eight Clinical Meeting held November 29—December 2 in Miami.

Named as the 1954 General Practitioner of the Year was Dr. Karl B. Pace of Greenville, N. C.

Other highlights of the opening session were addresses by Dr. Martin; Mr. Seaborn P. Collins, National Commander of the American Legion; Mrs. Oveta Culp Hobby, Secretary of Health Education and Welfare, and Mr. Edwin J. Faulkner, President of the Woodmen Accident and Life Company of Lincoln, Neb.

Mr. Collins told the House that he is willing to appoint qualified Legion representatives on a committee to take part in joint Legion-A.M.A. study of veterans' hospitalization. Later during the meeting the Board of Trustees announced appointment of a three-man committee to meet with the Legion on the issue of veterans' medical care. The members of the A.M.A. committee are Dr. Elmer Hess, Dr. David Allman and Dr. Louis Orr.

Mrs. Hobby, presenting the case for the Eisenhower Administration's health reinsurance proposal, said: "The health reinsurance proposal represents what we believe to be a necessity. It offers opportunity for self-help without subsidy." Mr. Faulkner, however, expressed the opinion that the reinsurance program, "would be foredoomed to disappoint its proponents," and he declared that voluntary health insurance can bring satisfactory protection "to practically all of our people" without a Federal reinsurance program.

Medical Ethics

Accepting a recommendation in a report of the Council on Constitution and Bylaws, the House amended Section 7 of Chapter I of the Principles of Medical Ethics so that it now reads as follows on the subject of patents and copyrights:

"A physician may patent surgical instruments, appliances and medicines or copyright publications, methods and procedures. The use of such patents or copyrights or the receipt of remuneration from them which retards or inhibits research or restricts the benefits derivable therefrom is unethical."

Hospital Accreditation

In place of an Indiana resolution protecting certain situations arising in connection with hospital inspections, the House adopted the following substitute resolution to resolve the problems in question:

"Resolved, that the Secretary of the American Medical Association be directed to request that the Joint Commission on the Accreditation of Hospitals supply a copy of the letter of notification regarding the results of the survey of each hospital to the Hospital Administrator, to the Chief of the Professional Staff and to the Chairman of the Governing Board of the hospital."

Osteopathy

The House concurred in the following supplementary report of the Board of Trustees on the osteopathic situation:

"Contingent on the receipt of the report from the Committee to Study the Relations Between Osteopathy and Medicine of its 'on campus' observations of osteopathic schools, the House of Delegates in June, 1954, agreed to hold in abeyance any action on this important subject until this meeting.

"The Committee, after meetings and extensive negotiations with the American Osteopathic Association, has now made final arrangements for visiting five of the six schools of osteopathy, and these plans have been approved by the Board of Trustees.

"It is the recommendation of the Board, therefore, that consideration of this matter be held in abeyance by the House of Delegates until the June, 1955, meeting, at which time the Committee expects to have a complete report of its findings concerning the nature, scope and quality of education in schools of osteopathy."

The Doctor Draft Law

The Reference Committee on Medical Military Affairs proposed the following policy

statement which was adopted by the House of Delegates:

"(A) That on the basis of current information the House of Delegates commend and express itself as being in complete accord with the Board of Trustees and its Council on National Defense that the 'Doctor Draft Law' should not be extended after June 30, 1955, and that the House of Delegates further express its confidence in the ability of the Board of Trustees and its Council on National Defense to properly handle any new situation which may develop in regard to this highly complex and involved problem.

"(B) That the Board of Trustees and its Council on National Defense continue to study the problem of providing the best possible medical service for members of the armed forces and that they make recommendations to the Department of Defense at the earliest possible time for a more permanent solution to the problem, giving special attention to the further development of a career medical corps with adequate compensation therefor."

State-Subsidized Medicine

Most controversial issue at the Miami meeting was a resolution on "Policy on Medical Practice by Tax Supported Medical Schools," introduced by the Mississippi State Medical Association. This resolution provided that:

"The American Medical Association reaffirm its unalterable opposition to socialized and state subsidized medicine regardless of the form which it may assume, and

"The House of Delegates of the American Medical Association is of the opinion that these principles should be considered by constituent and component medical societies together with all other facts pertinent to the local situation in all controversies arising in the employment of medical faculty by state (tax) supported medical schools and be fully considered in effecting action within the framework of this policy."

The Reference Committee on Medical Education and Hospitals agreed with that portion of the resolution regarding "unalterable opposition to socialized medicine" but recommended that the resolution be referred, to the Council on Medical Service which currently is studying the various aspects of this subject. The House adopted the reference committee's recommendation.

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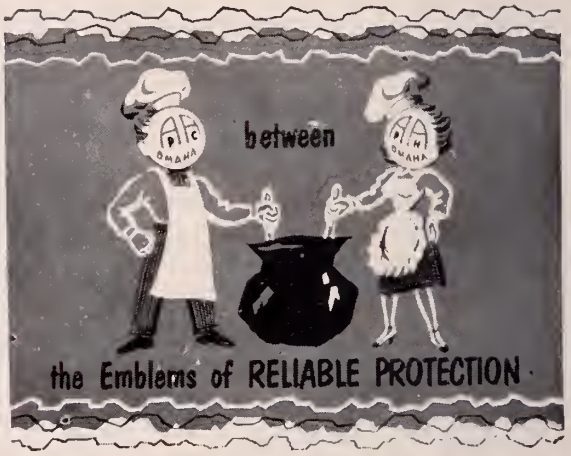

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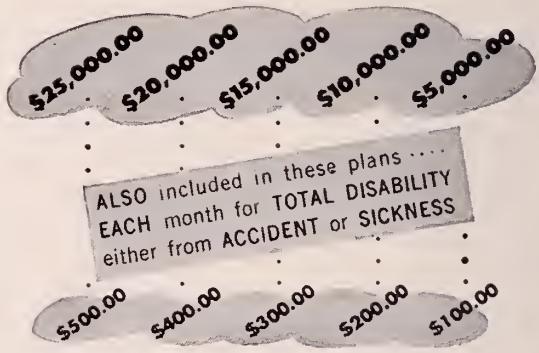

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Editorials

Stuttering

E. Douglass[1] points out that there are some 25 theories existing concerning the pathogenesis of stuttering and that all seem to rest on very insecure evidence. There is still a popular belief that stutterers are psychologically disturbed personalities and their stuttered speech is a symptom of the underlying neurosis. It must, of course, be acknowledged that many secondary stutterers are psychologically disturbed, but this does not mean that the neurosis caused the stuttering. In fact, it is more logical to say precisely the opposite—that the stuttered speech causes the neurosis. He states that it is not clinically profitable to work on the assumption that removal of the underlying psychoneurosis automatically dispels the stuttered speech difficulty; but the problem can best be understood and treated when regarded in simple terms of learned behavior which results from misguided attempts to compensate for the disability.

It is generally accepted that the disorder first develops with what is known as the primary phase. He observes that this comprises clonic spasm of speech musculature which results in the child's displaying excessive repetition of sounds; not the repetition of words or phrases which is normal in early speech learning, but the excessive repetition of syllables as sounds. Characteristically, the primary stutterer says M-m-m-m-m-Mummy or D-d-d-d-d Daddy. For the brief moment of speech difficulty he seems a little confused although not self conscious or embarrassed. The essential feature is that the child is not conscious of any disruption in his speech, or if he is aware of it, there is no evident self-reaction or struggle. It would seem that the condition is transient —the child may speak in this manner for a few hours, a few days or a few weeks, but periods of fluent speech intervene. There seems little doubt that the condition is precipitated by physical or psychological stress, and that with quietude the phenomena disappear.

Provided certain precautions are taken there is evidence that some "primary stutterers" may grow out of it. Unfortunately, the parents react to the early symptoms, and reproach the child for this kind of speech behavior. The usual advice offered by parents is to "speak slowly" or to "stop and start again" or to "think what you have to say." The techniques adopted appear to vary with the social status of the family, and it is believed that this determines the type of stuttering that eventually develops.

When conscious attempts are made to prevent clonic spasm (repetition) whether of the speech muscles or any other muscles, the result if "successful" is that the spasms are turned into tonic spasms, i.e., a prolonged fixation of the muscles. The effect upon the speech is that the child now says Mmmmm-Mummy—the initial sound is prolonged instead of being repeated. This development is believed to be the earliest sign of the secondary or complex stage of stuttering which may develop at any time between six and eight years. At the appearance of this phase there is usually clear evidence of self consciousness shown in the reactions of blushing and eye closure at the moment of speech difficulty.

1. Canadian Medical Association Journal. 71:66 (Oct.) 1954.

The Term "Public Relations"

The term "Public Relations" whether implying good or bad relations because of errors of commission or omission, active or passive, connotes a false appraisal. Emphasis on public relations is emphasized on the appraisal and not on what is being appraised. A surgeon, an internist or a subspecialist charges an unfair fee. To the public relations minded such behavior is bad for our public relations. That it undoubtedly is, but the sin is not only against the pub-

lic, it is against morality and is just as offensive to the medical body as it is to the public.

Dean Walter A. Bloedom of George Washington University School of Medicine[1] expresses his conception in this fashion:

"First, it might be well to consider some of the things public relations is—and is not. Public relations is not primarily an effort to influence public opinion so that it is favorable to us: it is not just avoiding unfavorable publicity: It is not getting our names in the papers at every possible opportunity. In a very broad sense, public relations, for any individual or for any institution, including a medical school, is taking an appropriate role in the activities of the community, and in fulfilling maximum obligations to the community. But in a more specialized sense, public relations has to do with communicating with the public. I submit this definition: *public relations is making known to the public all the available information that it needs or wants to know, in a form that it can readily understand.* This simple, straightforward approach divests public relations of all misunderstanding, mistrust and mystery. It is practically foolproof—an honest man does not have to waste energy trying to remember what he said, or failed to say, last week."

1. Med. Education 29:15 (Nov.) 1954.

Education or Training in Science

In this time of social, political and professional change it is significant that more and more of the leading scientists and scientific educators in the United States are becoming deeply concerned about the cultural background of their students. They realize the importance of the humanities in a proper pre-medical education. Their students do not, if Walter Alvarez is right. He states [SCIENCE *120*:896 (26 Nov. 1954)] "I have the unhappy feeling that most of the men whom I have watched as undergraduates, interns, residents . . . were not interested in becoming learned and widely experienced and wise. They were interested in getting a certificate . . . The less effort used in getting this certificate, the better."

Doctor Alvaraz relates an incident which occurred one day at a public examination for a Ph.D. degree in surgery when a young candidate reported satisfactorily on much research work on the stomach, yet was not able to identify Dr. William Beaumont or Alexis St. Martin!

Dr. Harwell Wilson, Professor of Surgery at the University of Tennessee, observed that "the importance of the humanities in the proper pre-medical education should not be overlooked. The successful doctor of medicine must first be given a concept of the world within which he is to live and work if he is to benefit most from his scientific training. The ability to think clearly through a problem in human relationships is often made easier by a knowledge of many things not to be found in cold scientific formulas" [*Memphis Medical Journal* (Nov. 1951)].

Dr. Harry J. Fuller of the University of Illinois has drawn the conclusion that we are *overtraining* our undergraduate and graduate students and not *educating* them. This view has been expressed by many more educators in less succinct phrases but few of them have offered a remedy.

This schism of academic science and medical training must be combatted with all the force at our disposal. As a beginning, we suggest that the president of our fine University appoint a study committee from his group of Norman and Medical School professors to develop a plan to circumvent the trend which Howard Mumford Jones deplores as "the increasing tendency to train scientists predominantly as superb research technicians rather than carriers of a flame."

Scientific Articles

The Physiologic Approach to DIAGNOSING *and* TREATING *Cerebral Palsy*

AVERILL STOWELL, M.D., Tulsa

The intricate problems in diagnosing and treating cerebral palsy have led me to seek a common denominator in the establishment of the clinical diagnosis, and also to correlate present and future methods of treatment. This paper will suggest criteria for diagnosis, discuss the rationale and results of surgical therapy, and offer a physiologic approach.

Strictly defined, cerebral palsy implies malfunctioning or non-functioning cerebral tissue, a lack of normal physiologic response of the brain to stimuli, and failure of development of certain movements and skills in an individual who appears healthy. It has been defined by Perlstein as:

> A condition characterized by paralysis, paresis, incoordination, dyskinesia, or any aberration of motor function that is due to involvement of the motor control centers of the brain. It should be differentiated from spinal palsies, such as peripheral neuritis due to lead poisoning or diphtheria. Defects in intelligence, personality, and sensation or epileptic diatheses may co-exist. In addition, there may be sequelae of cerebral palsy, such as physical deformities due to contractures and personality defects incident to the lack of opportunity for normal social development.

The underlying problems must of necessity be approached on the basis of disturbed patho-physiology of the central nervous syslems may be sought by delving into the complex ramifications of cells, axones, and synapes, with facilitation, feed-back, inhibition, reallocation of function carefully considered. The teamwork of orthopedists, sidered. The teamwork of orthopedists, physiotherapists, and occupational therapists, as well as of family physicians, has been stressed as being essential in diagnosing and treating the palsied child, and the Gestalt maxim that "The Whole is greater than the sum of the Parts" should always be foremost in the therapeutic approach.

THE AUTHOR

Doctor Stowell was graduated from Johns Hopkins. He served his residency at the Neurological Institute of New York and his internship at Johns Hopkins. His specialty is neurosurgery. Doctor Stowell served with the medical corps during World War II.

In this paper the important contributions of Perlstein, Phelps, Carlson, Fay, Fuldner, Strauss, Knop, Gesell, Yanett, Evans, and others will only be mentioned briefly. Pathologic material, especially the brain registry of Perlstein, the orthopedic and other papers on this subject will not be adequately covered, and the many surgical techniques for palsied extremities will not be reviewed. Excellent methods of examination and classifications have been summarized well in the recent papers of Perlstein, Fay, and Fuldner, who have stressed the necessity of early recognition and differential diagnosis. I would like to emphasize the importance of trying to reach a patho-physiologic diagnosis in the early stages, since brain tumors, anomalies, subdural hematomata, and hygromas often produce clinical pictures simulating cerebral palsy (see cases 3 and 6). There is, also, I believe, a great advantage in treating the palsied child early, both by medical means and in the rare case by surgical intervention. The use of priscoline, prostigmine, tolserol, vitamins, vasodilators, and stellate blocks has been of help in both diagnosis and prognosis.

Methods and Techniques

Early in 1946 I had occasion to treat a patient with hemiplegia by cervical sym-

pathectomy, and from 1947 to 1951 closely observed 42 adults with brain atrophy and Parkinson's syndrome who had interruption of the cervical sympathetic impulses to the brain. Some of these patients showed temporary or permanent improvement. In 1948 Sciaroni described an interesting series of human physiologic experiments on reversal of brain circulation, and this reversal of circulation was later taken up briefly by Beck, McKhann and their associates. The so-called reversal was an attempt to increase the oxygen supply to the brain cells by anastomosing the carotid artery to the jugular vein (internal). Considerable doubt was cast on the efficacy of the shunt by the work of Guerjian, Hammer, and others. Most of the dye injected into a human being after a carotid shunt, I have shown, does not pass into the superior longitudinal sinus or the vein of Galen; therefore, there was little likelihood of any substantial increase in oxygen reaching the damaged areas of the brain in the child with cerebral palsy following this operation. However, in the 65 patients I have treated by this maneuver, I obtained interesting results in that alterations in behavior, electroencephalogram, muscle tone, convulsions, and other factors occurred in a few cases to be reported below (cases 1, 2, and 4). Eight patients with cerebral palsy were treated by cervical sympathectomy, and four by ligation of internal jugular vein and cervical sympathectomy.

There has been no morbidity or mortality from the carotid jugular anastomosis, contrary to the findings of other investigators. I have had no morbidity or mortality in the superior cervical ganglionectomy series. The average length of hospitalization for these patients is three days, and none of my patients has remained in the hospital more than five days.

Psychological studies, psychiatric tests, orthopedic studies, electroencephalographic tracings, and social evaluations were obtained before and after the operation. When possible, patients of the younger age group, between two and eight years, were carefully studied at the Children's Medical Center by kindergarten teachers, physiotherapists, and occupational therapists, preoperatively and postoperatively, to evaluate fully the possible alteration in behavior and function. Pneumoencephalograms were carried out on almost all patients in this series to determine the type and degree of the degenerative changes in the brain. I found it very difficult to predict what degree of change the air studies would show on the basis of either clinical picture or the electroencephalographic findings. Some of my patients with marked mental retardation, especially those in the post-encephalitic group, showed only slight ventricular dilation or increased cortical markings.

The terminology of brain atrophy which will be subsequently discussed in this paper are: (1) cerebral atrophy associated with enlarged ventricles; (2) cortical atrophy with increased subarachnoid air; (3) cortico-cerebral atrophy; (4) cortico-cerebellar atrophy with enlarged sulci and increased posterior fossa air (5) cerebro-cerebellar atrophy; and (6) diffuse brain atrophy.

Case Reports

Case 1: The first case was that of a four year old white girl who was referred from Lamesa, Texas in 1951 because of uncontrolled grand and petit mal convulsions, an inability to speak, and markedly poor mental development. Pneumoencephalograms showed a severe degree of cortical atrophy associated with some dilatation of the ventricular system. After a right carotid jugular anastomosis, she showed a distinct improvement mentally; no convulsions have occurred on markedly less medication over a three year period, and there was definitely favorable alteration in the electroencephalogram one year and three years after surgery. Pneumoencephalogram in June, 1954, showed distinctly narrower sulci markings. In September, 1954, she entered the first grade.

Case 2: One of the other better results in the carotid jugular anastomosis series occurred in a 13 month old white girl who was referred because of inability to hold her head up and total lack of use of the arms and legs. The patient was unable to turn over in bed. The pneumoencephalograms showed a severe degree of cortical atrophy. Following a right carotid jugular anastomo-

sis, the patient was able to sit up is one month, to crawl in six weeks, and now is beginning to talk and walk at the age of three years.

Case 3: An eight month old boy was seen in the Department of Neurosurgery in December, 1948, because of his inability to sit up, poor feeding habits, and generalized muscular weakness. Neurologic examination showed no localizing signs, and roentgenograms and laboratory studies were normal. A pneumoencephalogram showed a markedly dilated ventricular system with the left lateral ventricle larger than the right and no cortical air on the left. Bilateral trephine holes were then made; and a huge subdural hygroma (meningeal cyst), containing more than 130 cc. of fluid, was removed from the left side. The patient was followed carefully for a year but failed to develop normally. In July, 1950, he had not played with toys and had made no effort to talk or help himself. A carotid jugular anastomosis was carried out; and two months later, he started to play with toys, pull himself up in bed, and walked on his toes with help. In December, 1951, he was able to use a walker well and could say "Daddy" and "Mommy." The final improvement evaluation was 12 per cent.

Case 4: A seven and one half year old girl was referred because of poor development which had first been noted at the age of four after an attack of encephalitis. The child had been unable to pass in pre-kindergarten. Examination revealed a slight weakness of the left leg and a left-sided hyperreflexia without pathologic reflexes. Pneumoencephalogram showed right cerebral atrophy (July, 1949). In March, 1950, the patient was seen in consultation at Enid, Oklahoma. Her I.Q. was then 80, and she was a distinct behavior problem. In April, 1950, a carotid jugular anastomosis and cervical sympathectomy were carried out. A dramatic improvement in her behavior was evaluated by Dr. William M. Binder at the Enid State School and Drs. Paul Benton and Richard Apffel of the Child Guidance Clinic, Tulsa. Her I.Q. rose to 94 in September, 1951, and she was "graduated" from the first grade in June, 1952. She continued to have some behavior problems, especially in relation to her mother. Her improvement was evaluated by at least 25 per cent.

Case 5: A nine year old white boy entered the hospital in April, 1950, complaining of severe spells. The spells had started in 1947 after measles encephalitis. They had gradually become more severe and had not been controlled by tridione, phenobarbital, and dilatin. Examination showed right central facial weakness with bilateral cerebellar signs, greater on the right. The patient was mentally dull. Pneumoencephalogram showed a mild right cerebral atrophy. The patient was followed carefully for two years and had no further attacks on small doses of medication (dilantin and tridione two times a day). Carotid jugular anastomosis was postponed to see the effects of air injection. The patient completed the sixth grade at age 11.

Case 6: A 13-year-old white boy was seen because his I.Q. was only 30. He had had a severe birth injury. He walked when he was 26 months. Neurologic examination showed a left hyperreflexia and a limp of the left leg. He had been unable to learn to read and attempted mirror writing. His speech was thick and slow, and a partial motor aphasia was present. Pneumoencephalogram showed an absence of the corpus callosum and a severe cerebro-cerebellar atrophy. Following operation, his vocabulary and spontaneity improved an evaluated 25 per cent. His I.Q. was 33 two months after operation. There was no further improvement after one year.

In evaluating the results of the surgical therapy, it was necessary to divide the group into those with epilepsy and those without epilepsy. In approximately 30 per cent of the 25 cases with intractable convulsions, the frequency and severity of attacks improved, and in two severe cases no further convulsions were present three years after surgery. In this epileptic group, the electroencephalographic changes after operation were interpreted as improved in seven cases, unchanged in 10 cases, and more abnormal in eight cases.

After operation, behavior was occasionally improved. Hyperkinetic activity was less,

understanding of commands was greater, and social relationships were more satisfactory. There was very little alteration in the I.Q. or other psychological tests. In only four of the 65 patients whose I.Q. was originally above 70, 20-point rises were noted after surgery. This result tends to confirm McKhann et al on the inadvisability of operating on patients with very low I.Q.'s. In 12 per cent of the children with the carotid jugular anastomosis, with or without cervical sympathectomy, weakness and ataxia were sufficiently improved to be recorded, but in the remaining patients no alteration was noted. In six patients improvement totally ceased at the end of two months, and in 12 no improvement was noted after the third month. In four patients improvement started after six months and in two patients after one year.

The beneficial effect of air injection on the occurrence of the convulsive seizures should always be taken in account since, as in case 5, there is often temporary or permanent improvement.

In general, the effects of the surgical procedures utilized to date by my group and others have been unsatisfactory. In four patients of the entire group the results were dramatic, and these patients were definitely benefitted. I wish to stress, however, that the surgical procedures which have been employed are only "experiments in altering cerebral physiology," that they should be considered as experimental, and that the prospective patient and family should be so advised. I believe that very detailed studies should be made before and for many months after operation. Patients with severe brain damage should not be treated surgically under any conditions except to try to alter the occurrence of the epileptic attacks (by the shunt operations or sympathectomy). I believe that ligation of the jugular vein which temporarily alters intracranial pressure may produce as good (or as bad) a result as the anastomosis. The cervical sympathectomy appears to be more effective than the shunt procedures.

Discussion

The principle changes produced by the shunt operations or ligations of the jugular vein are alterations in the cerebrospinal fluid pressure and possibly a slight slowing of the cerebral circulation in both the arterial and venous branches. Cervical sympathectomy may produce an alteration in arterial vasospasm, but probably it has its greatest effect via the facilitating hypothalamic-reticular-cerebellar pathways.

The clinical improvement noted in some patients after sympathetic impulses to the head have been interrupted cannot yet be explained physiologically. It was assumed in the early period of the present study that an alteration of cerebral circulation would account for the changes noted, but it soon became apparent that this theory would not adequately explain a number of results, especially in relation to the cerebral interpretation of painful stimuli. In searching for a possible further explanation of the phenomena noted, I was attracted to the work of Magoun and Rhines on facilitation mechanisms in the brain stem. It had been previously assumed, on purely theoretical grounds, that eradication of sympathetic impulses altered the excitability of ganglion cells in the thalamus, hypothalamus and cortex, or in some way favorably influenced transmission of impulses over synaptic junctions. The mechanism of facilitation was adequate to explain many of the results noted, and as time went on further reports and clinical observations tended to implicate the hypothalamus. Recent work by R. S. Snider on the inhibitory and facilitation mechanisms of the cerebellum further confirm this supposition.

An interesting observation was that in two patients, symptoms and roentgenographic views of gastric ulcers were improved after sympathectomy in one case and after cervical sympathetic block in the other. A similar observation was made by Little et al (1947) who used tetraethylammonium chloride in rats. Tinnitus (bilateral) was produced in two cases of procaine block, and this persisted for the duration of the Horner's syndrome. The physiologic mechanism in the temporary relief of the pain of carcinoma of the legs, the pelvis, seen in three cases, and the more lasting benefit observed in periarthritis, migraine, and more obscure pain syndromes after procaine block may be

related to hypothalamic-thalamo-cortical pathways. The elevation of mood in depressed patients, the "new freedom from worry," and the decreased nervousness are probably related to frontohypothalamic mechanism.

The brilliant work of Gantt and his coworkers following the Pavlovian concepts of conditioned reflexes has been largely overlooked by clinicians. The importance of this work, especially in regard to testing improvement in human beings and rehabilitation in animals after massive brain removals, should be emphasized. As Gantt has so aptly phrased it, "the conditioned reflex method is the chief means of determining changes in mental functions in animals and to a lesser degree in humans." The problem of cerebral dominance in the dog has been answered in part by utilizing conditioned reflex phenomena (Brogden). In rats Tsai and Maurer have demonstrated "right handedness." In my laboratory the tactile placing reaction in the cat has been studied extensively following cerebral and cerebellar ablations, and the return of this reflex days or weeks after massive brain resections has been of particular interest to me. In studying these results after single or multiple stage procedures over a 10 year period, I was impressed by the amount of rehabilitation these animals exhibited. Even with more than one-half of the cerebellar cortex and one-third of the cerebral cortex removed, most of the cats reacted normally to a battery of tests prior to the time of postmortem examination (six months after the last surgical procedure). During the last six months an olfactory receiving area in the vermian portion of the cerebellum of the cat has been found in my laboratory. This area is closely connected physiologically with a secondary sensory area of the face and the optic and auditory areas. This confirms the theories that both the cerebrum and cerebellum have "accessory" functional areas that can take over motor and sensory "duties" when their primary or chief areas are destroyed. Detailed studies likewise have shown a surprising "return or rehabilitation" of function in human beings after prefrontal leukotomy of lobectomy or hemispherectomy.

These different observations suggest that the brain of animal and man has the potentiality to take over functions that are "destroyed" by brain trauma, tumor, or degeneration. The so-called rehabilitation of the physiologic mechanism responsible for speech, thought, sensation, and motor movement is just starting to be understood. The theory of sharp cerebral and cerebellar localization of function is stressed less frequently than formerly in present day teaching, for the existence of three and possibly four tactile sensory areas in the cerebrum and three auditory areas mitigate against grouping of functions in a few brain cells.

Another approach to the problem of altering impaired cerebral function was suggested by the work of Alford, who demonstrated well the effect of diseased brain tissue on other parts of the brain many inches away. Recent reports of the advantages of hemispherectomy in cases of cerebral palsy tend to confirm this theory.

The physiotherapist, the occupational therapist, and the orthopedist have led the way in treating the patient with cerebral palsy, and their results have been excellent; but to achieve eventually the maximum improvement possible in the child with cerebral palsy, physicians will have to make greater use of their knowledge of neurophysiology.

Summary

Neurosurgical attempts to alter favorably the function of the damaged brain of the child with cerebral palsy have been unsatisfactory in 90 per cent of 77 cases treated by carotid-jugular anastomosis or cervical sympathectomy. In intractable epilepsy 30 per cent of the cases were improved after neurosurgical procedures. The rehabilitation of function of the brain in man and animal is discussed, and neurophysiologic explanations are evaluated.

ERYTHROBLASTOSIS FETALIS

ROBERT D. SHUTTEE, M.D.

THE AUTHOR

Doctor Shutte, an Enid pediatrician, graduated from the University of Oklahoma School of Medicine in 1944. He interned at Indiana University Medical Center at Indianapolis and also served his residency there.

Introduction

The subject of erythroblastosis was chosen for presentation, not as an entity that one would wish to treat or have the facilities to treat, but for the opportunity of discussing a few points of diagnosis and prognosis that might enable the physician to better recognize infants needing exchange transfusions and to answer some of the questions the parents may ask.

Erythroblastosis is a result of fetal-maternal blood incompatibility. In table 1, column I shows the various blood factors present in the blood system; column II shows those factors responsible for causing erythroblastosis; and column III shows the remaining factors which cause no difficulty. About 80 per cent of the cases of erythroblastosis are due to the Rh factor; less than 20 per cent are due to the A-B-O factor; and less than five per cent of the cases are due to the remaining factors.

Table 1
Major Blood Group Factors

I	II		III	
A-B-O	A	B	O	
Rh	D C E	C^w c e		
Kell	K	k		
M-N-S	M S	N s		
Duffy	Fy^a			
Kidd	Jk^a			
P			P	
Lewis			Le^a	Le^b
Lutheran			Lu^a	

(Courtesy of Dr. L. K. Diamond, Children's Hospital, Boston)

Table 2 shows the various combinations of the A-B-O group that may result in erythoblastosis.

Table 2
Incompatibilities That May Result In Erythrablastasis

Group of Babies	Group of Mothers
A	O
B	O
A or AB	B
B or AB	A

(Courtesy of Dr. L. K. Diamond, Children's Hospital, Boston)

Erythroblastosis is said to occur in approximately one out of 200 births. Of the white population, 85 per cent is Rh-positive; 15 per cent is Rh-negative. Eleven per cent of the marriages in the white population result in Rh incompatibility; however, only about 5 per cent of families in which the father is Rh-positive and the mother is Rh-negative have erythroblastotic babies. Thirty-five per cent of the matings are incompatible for A or B, yet only one per cent or less of infants incompatible with their mothers in the A-B-O group develop erythroblastosis.

From the foregoing figures, one can see that other factors than the incompatibility of the blood groups must be involved:

1. One, of course, is previous sensitization. It is thought that the mother must have been previously immunized by an Rh-positive pregnancy or by a transfusion with Rh-positive blood. The latter could have been by the intramuscular route even during childhood. The tendency toward smaller families would have a relationship to the percentage of occurrences of erythroblastosis.

2. Inability of the mother to produce antibodies.

3. Heterozygous father (a father who is considered to be both Rh-positive and Rh-negative and who will have 50 per cent of his offspring being Rh-positive and 50 per cent being Rh-negative).

4. Placental barrier.[1] Various investigators think that some tear occurring in the placenta allows the the passage of the antigens involved.

Pathologic Physiology

The mother is primed, so to speak, by a previous Rh-positive pregnancy or by a transfusion with Rh-positive blood. Antibodies pass from the maternal into the fetal circulation and attach themselves to the Rh-positive cells of the fetus; then there may occur intravascular occlusion of some of the vital organs.[2] Since the conglutinin content of the blood rises shortly after birth, most clumping will occur then.[3] One can see the value of doing an exchange transfusion in this instance to remove any contributing factors.

Wallerstein[4] states that 30 per cent of erythroblastotic babies born alive incur damage to the liver if left untreated.

Kernicterus, which is a neurologic complication of erythroblastosis, occurs in approximately 15 per cent of erythroblastotic babies who are not given careful treatment. The early clinical signs are rather non-specific, such as disinterest in feedings and lethargy; in the more severe cases, however, opisthotonus and rigidity may occur. Kernicterus usually occurs in the severely jaundiced babies. The pathologic changes are staining of the nuclear areas and, frequently, neuronal damage.

Vogel[5] recently reported an experiment in which he injected mesobilirubin, a reduction product of bilirubin, into the brain of kittens. In these kittens, there were signs resembling those of kernicterus as found in infants. Yet, when bilirubin itself was injected into the kitten brain, there was no evidence of kernicterus present. Vogel conjectured that the neurons were not damaged by the bilirubin pigment but that some other factor was involved to explain the frequent occurrence of neuronal damage. He also thought that there must be an alteration of the blood-brain barrier in some infants which allows the bilirubin to pass into the brain substance, where it is changed to mesobilirubin with the resultant pathologic findings.

Symptoms

Jaundice is the most important symptom, and, as stated previously, the occurrence of kernicterus is directly related to an increased serum bilirubin. There may be a skin lag in the clinical appearance of jaundice from the increasing bilirubin.

Anemia is a common finding but may be masked the first two or three days because of increased production of blood.

Hepatosplenomegaly is usually present but is not always detected upon physical examination.

The presence of edema or petechiae is indicative of bad prognosis; although their etiology is obscure, they probably are caused by damage to the liver.

Kernicterus, as mentioned previously, is manifested by lethargy, rigidity, opisthotonous; it occurs usually not before the second day and is most common in males and immature babies.

Laboratory Findings

The Coomb's test is a non-specific test in that the serum will agglutinate any human globulin. However, if the infant's cells are washed thoroughly to remove globulin other than the anti Rh (the globulin usually involved in erythroblastosis), then agglutination is indicative of a positive Coomb's test; a positive Coomb's test in a newborn infant usually means that the infant has erythroblastosis. Also, the Coomb's test is positive in acquired hemolytic anemia; it is weakly positive or negative in erythrobastosis due to A-B-O factor and negative in congenital hemolytic icterus.

The nucleated red cells are usually above 10 per cent of the white cells; this is an inconstant and unreliable findings so far as the diagnosis and prognosis are concerned. The white cells are usually elevated. The platelets are lowered in severe cases; the red blood cells and hemoglobin vary.

The bilirubin may be up to 60-70 mg. per one hundred cubic centimeters.

Diagnosis

The diagnosis of erythroblastosis depends upon the previously described findings. Very often the value of a material antibody titer is questioned. True, there frequently will be a high antibody titer in a mother who gives birth to an infant with little or no evidence of erythroblastosis; on the other hand, the mother may have a low antibody titer and give birth to a severely ill infant

with the hemolytic disease. True, too, occasionally an Rh-negative infant will cause a rise in the maternal antibody titer of a mother previously sensitized; this is said to be an anamnestic reaction.[6]

Nevertheless, Ginsberg and Feldman[7] state that the severity of the disease can be determined about 80 per cent of the time by the level of the maternal antibody titer. And Zelenik and his group[8] found close correlation with an increase in the antihuman globulin antibody titer (indirect Coomb's) of the mother and the severity of the hemolytic process in the infant.

I believe that the majority are of the opinion that one antibody titer at 30-38 weeks' gestation is all that is necessary. Yet in several women with histories of previous pregnancies, one could not be certain that, if a positive titer is obtained in the last trimester, whether or not the rise was due to sensitization by the earlier pregnancy or the present. From the points discussed, it seems that the logical thing to do, if at all practical, would be to obtain a titer in early gestation and again the last two-three weeks of gestation; any definite increase would be of particular significance, and adequate preparation for an exchange could be made.

Indications for Exchange Transfusion

Absolute indications (assuming the infant is Rh-positive and has a positive Coomb's test):

1. A baby with obvious signs and symptoms of severe hemolytic anemia present or pending at birth or shortly thereafter—such as anemia with four million red cells or less, nucleated red cells in the smear, increased bilirubin (5-10 mg. per one hundred cubic centimeters or above) in the cord blood, hepato-or splenomegaly, pallor, etc.
2. An infant who shows increasing bilirubin during the first 24-36 hours, in whom the danger of kernicterus (bilirubin level of 15-30 mg. per hundred cubic centimeters) is great.
3. An infant whose mother has lost, in previous pregnancies, one or more infants with erythroblastosis, or had an infant with kernicterus.
4. Infants born prematurely, even if they show none of the foregoing, and are small and immature and therefore are much more prone to trouble, especially kernicterus.

Less absolute indications (assuming the infant is Rh-positive and has a positive Coomb's test):

1. Maternal antibody titer of 16-32 in a mother with no history of previous trouble. Statistically, infants born of such mothers are less likely to get by without need for several small transfusions; an exchange transfusion would probably allow the infant to leave the hospital with the mother and would not require prolonged hospitalization or multiple transfusions.

   There will arise cases in which the maternal antibody titer is 16-32, but the infant shows no evidence of hemolysis at birth and develops little jaundice; and, too, the mother has had previous mild erythroblastotic babies. These infants can remain untransfused and observed.

   At this point it is well to mention that one exchange transfusion when the baby is under 24 hours of age is better than two transfusions later.
2. Cord hemoglobin less than 15 Gm.

Prevention

Prevention of erythroblastosis has, to date, been rather unsuccessful. Hunter and Ross[9] report a rather successful series in the use of cortisone in the mothers during gestation. They base the results on the theory that ACTH and cortisone suppress reaction of tissue cells to antigen and that cortisone, given adequately in the last trimester, will prevent hemolysis in the fetus. On the other hand, many workers do not believe steroids to be of value in preventing erythroblastosis.[10, 11]

Early induction of labor has been abandoned because of increased mortality, in that the immature babies are especially susceptible to kernicterus. However, in a few cases with a bad history, particularly those in whom fetal activity diminishes, one may consider induction no earlier than 38 weeks gestation.

Table 3

Results in Erythroblastotic Babies Treated within 24 hours of Birth, Children's Hospital, Boston.

	1/1/45 to 10/31/46	11/1/46 to 3/31/49	4/1/49 to 6/30/51
Total Cases	78	199	257
Recovered, on sequelae	38 (49%)	153 (77%)	225 (87%)
Kernicterus	26 (33%)	20 (10%)	4 (2%)
Died, no kernicterus	14 (18%)	26 (13%)	28 (11%)
Cases per year	42	82	114
Kernicterus per year	14	8	2
Exchange transfusion	0	73%	86%
Multiple exchange transfusion	—	0	20%
Female donor	—	16%	82%
Gestation less than 38 weeks	50%	47%	25%

(Courtesy of Dr. L. K. Diamond, Children's Hospital, Boston)

Table 3 shows the results of erythroblastotic babies presented for treatment within 24 hours of birth at Boston Children's Hospital.

The table covers three time periods. The second period starts with the use of the exchange transfusions. The third period starts with adoption of present criteria used by the hospital. One factor is a more liberal use of the exchange transfusion. A decrease in the mortality, as well as the incidence of kernicterus is noted.

Summary

A discussion of the pathologic physiology, symptoms, laboratory findings and diagnosis of erythroblastosis has been presented, with the purpose of enabling the physician to better recognize infants needing exchange transfusions. And discussion on the technique of doing an exchange transfusion has intentionally been omitted; direct observation or actual performance would be of much more value than words.

Acknowledgment

The author wishes to express his sincere appreciation to Dr. Louis K. Diamond, associate professor of pediatrics at the Children's Hospital, Boston, for his help in the preparation of this paper.

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Case Reports

Anaphylactic Death Due to PROCAINE-PENICILLIN G

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THE AUTHOR

Doctor Coin was graduated from the University of Oklahoma in 1951. He served in the Air Force from 1942-45 and 1952-53. Doctor Coin formerly practiced in Wagoner.

The following case report of an anaphylactic death as a result of procaine-penicillin G ("Duracillin") demonstrates survival for about 12 hours in refractory peripheral shock. An electrocardiogram taken about one and one-half hours after the intra-muscular injection is included.

College records show that the patient, a 21-year-old Cherokee Indian male student, had received a total of at least 7 cc. of procaine-penicillin G during December, 1953. It is not known if he had taken penicillin prior to this. No history of previous reactions was obtained; however, questioning of the parents after the patient's death disclosed that after a penicillin injection on March 3, 1954, he had not felt well that evening. He had momentarily felt dizzy and complained of nausea and epigastric pain.

At about 10:30 a.m. on March 17, 1954, he was given 2 cc. of procaine-penicillin G intramuscularly in the gluteal region because of an acute pharyngitis. He set up, complained of dizziness and started to leave the infirmary. But after taking only a few steps, he collapsed on the floor, became markedly pale, and developed gasping respiration. He did not have a convulsion. The nurse was unable to detect a pulse. She gave the patient an ampule of caffeine and sodium benzoate.

When I saw the patient at 10:40 a.m., he had become markedly cyanotic, his respiration was spasmodic, and his heart sounds could not definitely be heard. He was given 1 cc. of 1:1000 aqueous solution of epinephrine partially intramuscularly and partially intravenously with return of heart sounds and a palpable carotid pulse. The radial and dorsalis pedis pulsations were not palpable and remained so with little exception until the patient's death.

The patient was admitted to the city hospital at 11:00 a.m. Oxygen was started by nasal catheter, five per cent glucose in water begun intravenously, 100 mg. of cortisone given intramuscularly, and epinephrine in oil given frequently limited by tachycardia. Blankets and shock blocks were used. Physical examination showed the patient to be partially conscious but disoriented. He was able to ask for his mother and complain of severe epigastric pain. The skin and nails remained markedly cyanotic, the skin cool and dry. Pupils were dilated but reacted to light. The fundus was normal. Throat was moderately red and edematous; the nose and ears were normal. The temperature was 97° F.; the precordial pulse 150; and the respiration was 24. The blood pressure was unobtainable. The lungs sounded remarkably clear and the breath sounds normal with exception of the increased rate. No rales were heard. The heart was not enlarged to percussion, the rhythm was regular, and no murmurs were heard. There was tenderness in the epigastrium on palpation but no guarding. The liver, kidneys and spleen were not palpable. The bladder was not distended. A femoral pulse was palpable but weak. The genitalia were normal male and the rectum normal. Muscle tone was poor but the reflexes were present and equal though hypoactive. Laboratory findings: Hemoglobin 18 plus grams, white blood count 23,000 with 67 filamentous forms and 33 monocytes (lymphocytes) per 100 cells. Urine was not obtained. An electrocardiogram (reported below) was interpreted as showing tachycardia, diffuse myocardial ischemia and probably myocardial injury.

By 11:30 a.m. the patient was fully con-

cious, well oriented and euphoric; he was hungry and wished to go home. Despite this apparent improvement, profound shock was still present as shown by the still unobtainable blood pressure and persistent cyanosis. By about 12:00 noon he had a loose bowel movement and complained of severe epigastric pain. Morphine 15 mg. with atropine 0.4 mg. was given at 01:45.

His condition remained poor despite these measures and by 5:45 p.m. "Levophed" 8 mg. in 1000 cc. five per cent glucose in water was started intravenously. This was continued until the patient expired. By 7:00 p.m. one attendant thought he got a systolic blood pressure of 40 mm. of mercury but this could not be heard on second trial. By 8:00 p.m. the epigastric pain had returned and the morphine was repeated. He then became irrational, pulled the intravenous needle out, and got out of bed. From this time his condition rapidly deteriorated. He was comatose again by 9:00 p.m. A few minutes before he died at 10:50 p.m. his respirations became irregular and the heart sounds irregular and weak.

Comment

In retrospect, I believe this patient should have been given whole blood despite the hemoconcentration and that the "Levophed" should have been given more rapidly intravenously.

Electrocardiogram: The auricular and ventricular rates were 150 (average) and the rhythm regular. PR 0.12 sec., QRS 0.08 sec., QT 0.31 An rS pattern or QS is present in all leads except AVR and AVF. AVR has a qR with upright P and downward T waves; AVL has a small R with notching on the upstroke and with an upright P and diphasic T. P waves are present and less than 1 mm. in height in all leads and are upright. T waves are upright in all leads except AVR and AVL in which the T waves are diphasic (down-up). The precordial T waves are tall: T V1 8mm., V2 12mm., V3 9mm. All the R waves are quite small except in AVR and deep S waves are present in all leads except AVR and AVL.

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Black Widow Spider Poisoning Treated with SUCCINYLCHOLINE CHLORIDE

EDWARD K. NORFLEET, M.D.

THE AUTHOR

Doctor Norfleet was graduated from the University of Arkansas School of Medicine in 1952 and has been practicing in Sapulpa since that time.

Each year a number of patients present themselves to their physicians throughout the nation after having allegedly been bitten by a black widow spider (Latrodectus mactans). Many of these patients have rather mild symptoms which may respond to any type of therapy. In any event he, and especially his family, anticipates immediate and dramatic therapy. Many remedies have been recorded as being efficacious. Thorp and Woodson record in their book magnesium sulphate, morphine, hot baths and fomentation, enemas, blood letting, camphor and potassium permanganate, strychnine, edgewood, calomel, echinacea, eucalyptol, Dover's powder and Darby's fluid, indigo, lavender, squirrels ears, olive oil, phenol and many others.[5]

It is interesting to note that one courageous author has recorded that aromatic spirits of ammonia applied locally and given orally with one-fourth grain of morphine is not effective at all.[2]

A number of articles have been written concerning the use of the specific antivenin. From all available reports this is, perhaps, the best therapy of all. The company which produces this efficient product was not making it during the time that we were confronted with our therapeutic problem. This report describes the use of succinylcholine chloride, a recently introduced muscle relaxant, as an emergency substitute for specific antivenin to alleviate the respiratory difficulty associated with severe muscle

spasm. The use of d-tubocurarine in this condition has already been reported.[1] Although the end results may be similar it is felt that succinylcholine chloride acts in a different manner than does d-tubocurarine.

During the spring and summer of 1954 three patients suffering from arachnoidism were seen. All were males who were occupying seats in outdoor privies at the time the bite was inflicted. One was bitten on the buttocks; one was bitten on the shaft of the penis while the third was bitten on the scrotum. The patient bitten on the penis and the one bitten on the scrotum were observed to develop rather severe respiratory distress. All of the patients recovered without residual effect.

Case Report

A 23 year old white male was seen in the emergency room approximately forty-five minutes after being bitten on the shaft of the penis by a black widow spider. The identify of the arthropod was confirmed by observation after it was later captured by the patient's father.

The patient stated that he first experienced a severe stinging sensation on the penis and that he though he had been stung by a wasp. Without further investigation he immediately ran into the house. Approximately 10 to 15 minutes later he developed severely painful abdominal cramps and muscle spasm in both thighs. When this patient was first seen he appeared confused and apprehensive and appeared to be acutely and severely ill. His blood pressure was 140/80 and the pulse was 124. The pupils were markedly dilated but responded to light. The patient thrashed about wildly from his waist up, turning his trunk from side to side. Respiration was very shallow and rapid. The lips were moderately cyanotic. He was immediately given 20 cc of 10 per cent calcium gluconate with only moderate transient relief of pain. The spasm of the legs and abdominal muscles appeared to be increasing.

At this time an infusion of succinylcholine chloride was started in an attempt to control the abdominal spasm which was retarding the respiratory excursion. 100 milligrams of meperidine and 1/200 grain of atropine were given intravenously to allay apprehension. The infusion was then started utilizing 400 milligrams of succinylcholine chloride in 500 milliliters of 5 per cent glucose in normal saline. The infusion was started at 30 to 40 drops per minute with almost immediate relief of the muscular spasm. At the same time apnea developed. The infusion was temporarily discontinued until respiration spontaneously resumed. The infusion was continued for the next nine hours at 10 to 25 drops per minute depending largely on the subjective symptoms in regard to breathing difficulty. Two hours after starting the infusion the patient complained bitterly of severe cramping pains deep in the abdomen and in the thigh muscles. There was no evidence of spasm or muscle rigidity. At this time he was given 100 milligrams of meperidine, 1/200 grain of atropine and 2 grains of sodium phenobarbital intramuscularly. Following this the patient slept for the next seven hours arousing occasionally to complain of pain in the left thigh and left hip. Respiration was maintained at 10 to 15 excursions per minute.

On the second and third hospital days he had some rather severe chills which were not accompanied by fever. He also had several episodes of generalized pruritus which were controlled by sodium bicarbonate baths. There was, however, no return of the abdominal rigidity and muscle spasm after the first night.

Summary

A case is reported in which succinylcholine chloride was used to relieve muscle spasm following the bite of a black widow spider. To my knowledge this is the first time that this drug has been used for arachnoidism. Due to the short duration of action of such an infusion it is not anticipated that any great difficulty will arise in controlling respiration. It is needless to say that facilities for controlled respiration and oxygen administration should be at hand.

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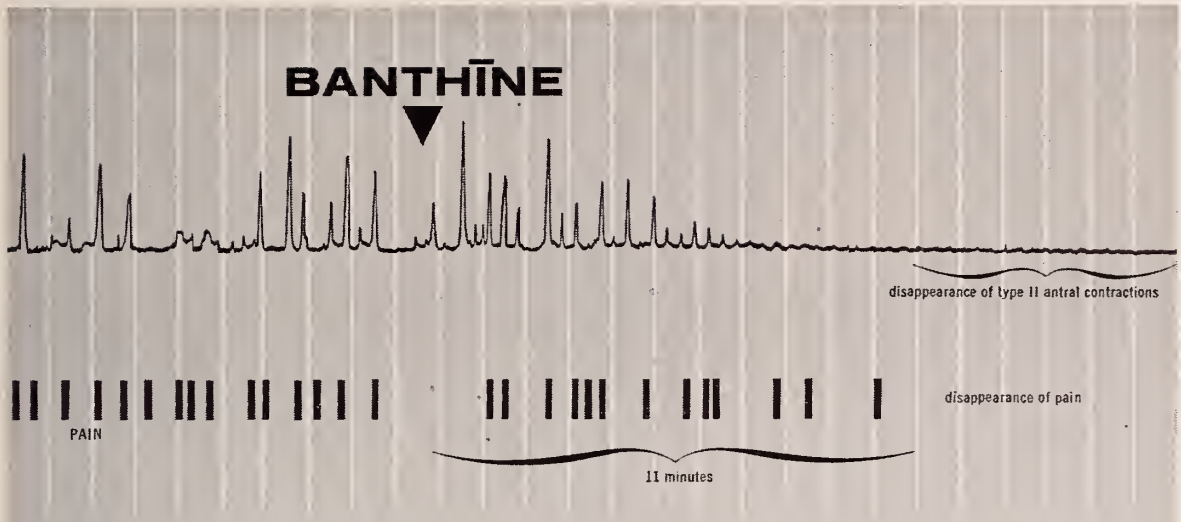

Effect of 100 mg. of Banthīne administered orally on antral gastric motility and duodenal ulcer pain.

Hightower, N. C., Jr., and Gambill, E. E.: Gastroenterology 23:*244 (Feb.) 1953.*

Hypermotility and Hyperacidity

A recent evaluation of anticholinergic therapy in peptic ulcer emphasizes the fact that now the profession has at its disposal agents that are "effective in reducing both secretory and motor activity of the stomach."

The effect on motor activity is generally more pronounced and less variable than on secretion; pain relief is usually prompt; a high degree of effectiveness is noted in ambulatory ulcer patients.

Ruffin, J. M.; Texter, E. C., Jr.; Carter, D. D., and Baylin, G. J.: J.A.M.A. 153:*1159 (Nov. 28) 1953.*

With its proved anticholinergic effectiveness, Banthine has been found extremely useful in the medical management of active peptic ulcer, whether duodenal, gastric or marginal.

The immediate increase in subjective well-being and the simplicity of the Banthine regimen assures patient cooperation. The recommended initial therapeutic dose is 50 or 100 mg. (one or two tablets) every six hours around the clock, with subsequent individual adjustment. The usual measures of diet regulation, rest and relaxation should be followed.

Banthine is effective in other conditions caused by excess parasympathetic stimulation. These include hypertrophic gastritis, acute and chronic pancreatitis, biliary dyskinesia and hyperhidrosis. Banthine is contraindicated in the presence of glaucoma and should be used with caution in the presence of severe cardiac disease or prostatic hypertrophy.

Banthine bromide (brand of methantheline bromide) is supplied in scored tablets of 50 mg. and in ampuls of 50 mg. It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.

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PRESIDENT'S LETTER

It takes a particular type of an individual to have the desire to take up the study of medicine. Outwardly doctors look much the same as people in other professions or lines of work, but all successful doctors have one thing in common, and that is the innate desire to be of service to others. Of course it is necessary that we, as doctors, make a living for ourselves and our families, but that is only a small part of our reason for existence.

This desire to be of service may not always be demonstrated in relation to patients. This point was brought out recently when I observed 10 or 12 busy doctors meeting for long hours, three days in succession to try to solve satisfactorily one single problem confronting the medical profession. At the beginning of the meetings there were many diverse opinions, but at the conclusion of the session there was unanimous agreement, and, we hope, a wise decision. These doctors were serving not their own purposes, but were acting for the good of the profession as a whole.

Such a willingness to serve has gained for doctors everywhere the respect of other citizens in their communities. We must do all in our power to continue to deserve and maintain this status.

Bruce R Harrison

President

ELECTRON PHOTOMICROGRAPH

Hemophilus influenzae 64,000 X

Hemophilus influenzae ("influenza bacillus") is a Gram-negative organism which grows only in the presence of hemoglobin. Contrary to its name, it is not the causative agent in influenza, but rather is commonly involved in

meningitis • chronic bronchitis • bronchiolitis
tracheobronchitis • supraglottic laryngitis • bronchopneumonia

It is another of the more than 30 organisms susceptible to

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Russ Morgan's Orchestra To Play for Dinner-Dance

Oklahoma doctors and their wives will dance to the famous music of Russ Morgan and His Orchestra, one of America's best known dance bands, at the President's Inaugural Dinner Dance on Tuesday, May 10, 1955. The event will be a feature of the 62nd Annual Meeting of the Oklahoma State Medical Association to be held in Tulsa, May 9-11.

The Dinner Dance will be preceded by a complimentary social hour at 6:00 p.m. at The Mayo with visiting doctors as guests of the Tulsa County Medical Society. Dinner will be served at 7:00 p.m. in the beautiful Crystal Ballroom of The Mayo.

A special after-dinner feature will be an entertaining talk by Countess Maria Pulaski, lecturer, author, and internationally known Polish socialite. Countess Pulaski's presentation will be based upon incidents described in her new best seller, "I Was A Spy For The Polish Underground," published this month to rave literary reviews.

The evening will conclude with four hours of dancing to Russ Morgan and his "Music In The Morgan Manner."

Tickets for the President's Inaugural Dinner Dance may be purchased in advance by writing the Tulsa Medical Society, B9 Medical Arts Building, Tulsa, Oklahoma. The price will be $6.50 per person, tax included. Checks should be made payable to the Oklahoma State Medical Association; tickets will be mailed by return mail. Tickets may also be purchased at the Reservation Desk at the Cimarron Ballroom. Attendance will be limited to 425 persons, the capacity of the Crystal Ballroom.

Hotel reservations for the 1955 Annual Convention should be made by writing the Hotels Committee, Tulsa County Medical Society, B9 Medical Arts Building, Tulsa, Oklahoma. A handy card for this purpose appears in this issue of *The Journal.* Please state date of arrival, date of departure, type of accommodation desired, and preferred hotel. Confirmations will be mailed directly. Please do not write hotels directly as the Tulsa Hotel Association requires reservations to be made through the official bureau.

Russ Morgan and His Orchestra first

Russ Morgan

came to popularity in the early thirties when his famous theme song, "Does Your Heart Beat For Me," climbed to the Number One spot in the nation's popularity. His talented entertainers promise a delightful evening for convention visitors.

Pediatrician Completes Guest Speaker Roster

Robert B. Lawson, M.D., nationally known pediatrician and Chairman of the Department of Pediatrics at the University of Miami School of Medicine, Miami, Florida, is the latest addition to the panel of visiting distinguished guest speakers at the 62nd Annual Meeting of the Oklahoma State Medical Association in Tulsa, May 9-11, 1955.

Doctor Lawson brings to 10 the number of visiting guest speakers, all selected from the ranks of leading medical personalities in the United States. With members of the Oklahoma State Medical Association, the panel will present a total of 29 scientific papers. A complete listing of the guest speakers appears in the February issue of *The Journal.*

Walter E. Brown, M.D., of Tulsa, Chairman of the Scientific Work Committee, last month announced that two roundtable luncheons had been arranged for Monday and Tuesday, May 9th and 10th. Each will feature guest speakers answering questions from the floor. The luncheons will be held at The Mayo, and tickets may be purchased at the Registration Desk.

Tulsa County

Dr. Laurance K. Snyder, dean of the graduate school of the University of Oklahoma and author of four books on various phases of human heredity was guest speaker at the Feb. 14 meeting of the Tulsa County Medical Society. His topic was "Genetics and Medicine—With Special Reference to Blood Transfusions."

Okfuskee County

A. S. Melton, M.D., was named president of the Okfuskee County Medical Society at a recent meeting held in Okemah. Other officers elected were W. P. Jenkins, M.D., vice-president; and Charles Lee Reynolds, Jr., M.D., secretary.

Kay-Noble

Paul Benton, M.D., Tulsa, spoke on mental health clinics at a recent meeting of the Kay-Noble County Medical Society held in Ponca City.

Jackson County

"Pediatrics" was Charles Green's M.D. topic when he addressed a meeting of the Jackson County Medical Society in Altus. Doctor Green is from Lawton.

Garfield-Kingfisher

Frederick G. Hudson, M.D., presented a paper on "The Problem of Gastric Ulcer" at a meeting of the Garfield-Kingfisher County Medical Society held recently in Enid. Doctor Hudson presented the same paper at the World Medical Association held last year in Rome, Italy.

Stephens County

Officers recently elected by the Stephens County Medical Society are Randell E. Davis, M.D., president; J. P. Keller, M.D., vice-president; Casper Smith, secretary-treasurer. Guest speaker was Joseph Kelso, M.D., Oklahoma City, at the regular monthly meeting at which election of officers was held.

Lincoln County

The January meeting of the Lincoln County Medical Society was held in Meeker.

Ottawa-Craig

Glenn W. Cosby, M.D., Miami, is the new president of the Ottawa-Craig County Society. Other officers are H. C. Ford, M.D., Miami, president-elect, and John E. Highland, M.D., secretary.

Claremore Builds New Health Center

Dedication ceremonies January 30 of the Claremore Health Center culminated five years of work and planning by citizens of that community for a modern hospital and health center.

The T-shaped building is 236 by 112 feet and designed for future expansion.

Located just west of the Health Center is the new Claremore Clinic. Physicians associated in the clinic are Ralph Meloy, M.D., O. U. Holt, M.D. and Monroe Jennings, M.D.

Goiter Association To Meet in April

Announcement has been made of the annual meeting of the American Goiter Association to be held at the Skirvin Hotel in Oklahoma City April 28, 29, 30, 1955.

The meeting will bring together the leading thyroidologists in the United States and Canada, including endocrinologists, internists, surgeons and radiologists.

All members of the Oklahoma State Medical Association are invited to attend these meetings. Program may be obtained from the Secretary, John R. McClintock, M.D., 149½ Washington Ave., Albany, New York, or from Henry H. Turner, M.D., 1200 North Walker, Oklahoma City.

Registration fee for the three day session is $10.00.

Have You Heard?

JULIUS LACROIX, M.D., Hugo, was recently honored as an outstanding alumnus of Bacone College at a special founder's day program.

L. R. KIRBY, M.D., formerly of Cherokee, has moved to Enid.

F. L. FLACK, M.D., Tulsa, recently received a DAR Award of Merit for his humanitarian service.

CLAUDE H. WILLIAMS, M.D., Okeene, recently conducted services at the Okeene and Farview Church of Christ.

W. K. HAYNIE, M.D., Durant, has been named chairman of the Oklahoma Planning and Resources Board. Doctor Haynie previously served two years as a member of the Oklahoma Game and Fish Commission.

E. W. KING, M.D., Bristow, was recently honored with a surprise dinner given by doctors and nurses of his community on the occasion of his 50th year of practice.

B. R. WESTBROOK, M.D., Bartlesville, spoke on "Recent Advancement in Gynecology" at a meeting of the District 9 Oklahoma State Nurses' Association.

R. C. MELOY, M.D., Claremore, was presented a bronze plaque by the Claremore Chamber of Commerce for his activities in that group.

G. A. KILPATRICK, M.D., Henryetta, has closed the John Taylor Hospital because of ill health although he plans to continue his office practice.

CHARLES H. MILLER, JR., M.D., Lawton, is the new director of the City-County Health Unit in Frederick, Altus and Lawton.

H. D. WOLFE, M.D., Hugo, reminds his patients of the days of horse and buggy doctors as he makes his calls on Sundays and his afternoon off in a horse drawn buggy. During bad weather, he supplements the horse and buggy with a more durable jeep.

CHARLES GRAYBILL, M.D., Lawton, showed a film of one of his surgical procedures at the meeting of the American Academy of Orthopedic Surgeons in Los Angeles recently.

GILBERT L. HYROOP, M.D., Oklahoma City, attended the 10th Annual Convention of the American Society of Hand Surgery in Los Angeles January 26-28. He is a founder of the organization.

R. E. ROBERTS, M.D., Stillwater, was speaker at the Rotary Club of that city recently. He traced the progress of medicine from the time of Hippocrates to the present time.

Anadarko Clinic Planned For Patient Comfort

Open house was held January 30 for the new $90,000 Anadarko Clinic. The hexagon-type structure is equipped to accommodate six physicians. (See Picture below.)

Physicians associated in the clinic at the present time are E. T. Cook, Jr., M.D., G. E. Haslam, M.D., J. B. Miles, M.D., and Burl E. Stone, M.D.

A lounge is set in the center of the hexagon forming a hub from which corridors lead to doctors' suites and to business offices. The outer hexagon forms a ring of consultation and examination rooms. Each physician's office has its own private entrance. Ceilings are laid with soundproof materials and the building has an all concrete flat roof.

Year round air conditioning is installed throughout the building and fluorescent lighting is supplemented by means of an unbreakable plasti-type material.

ELECTRON PHOTOMICROGRAPH

Diplococcus pneumoniae 44,000 X

Diplococcus pneumoniae (Streptococcus pneumoniae) is a Gram-positive organism commonly involved in

lobar—and bronchopneumonia • chronic bronchitis • mastoiditis • sinusitis otitis media • and meningitis.

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Typhus Fever
Sinusitis
Gonorrhea
Bacillary Dysentery
Pneumonia with or without Bacteremia
Bronchopulmonary Infection
Acute Pyelonephritis
Chronic Pyelonephritis
Mixed Bacterial Infections
Soft Tissue Infections
Staphylococcal Septicemia
Pneumonoccal Septicemia
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Intestinal Amebic Infections
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Book Reviews

PREREQUISITES OF GOOD TEACHING AND OTHER ESSAYS. Ernest Sachs, M.D., Shoestring Press, 51 Carolyn St., Handen 17, Conn. 1954.

"To Members of My Thursday Clinic"

Such is the dedication of *Sachs Essays.* To every one who was fortunate enough to be included in that group, this little book will immediately bring to mind a host of memories. The usual hum characteristic of a waiting class suddenly quieted as a short stocky figure with the shoulders and the gait of a wrestler enters the Amphitheater. No more hum, only pin point concentration.

It is the same concentration which one should give to the book. The first essay, "Prerequisites of Good Teaching," is well placed, it is perhaps the most informative of all. Every essay is on a practical subject, such as "The Case that has been Recognized too Late." All have been written after a preparation of 35 years teaching, and counseling medical students.

This pocket sized edition should be in the hands of every medical student, nurse, interne, resident and faculty member of any medical school. Time could not be better spent than reading and re-reading each Essay. Therein lies the answer to many questions prospective and actual students of medicine would like to ask, but dare not approach the high rostrum on which their instructors are prone to be found.

"A Member of the Thursday Clinic"—
L. J. Starry, M.D.

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A voluntary hospital providing the care and treatment of nervous and mental patients, and associate conditions.

ILLUSTRATED REVIEW OF FRACTURE TREATMENT. Frederick Lee Leibolt, Lange Medical Publications, 1954, Price $4.00.

This book is intended to illustrate and to discuss, briefly and systematically, the principal features concerning the diagnosis and treatment of fractures, being written for the medical student, the house officer, and the general practitioner.

The author has prepared the book in outline form, briefly discussing in each fracture the etiology, incidence, pathology, clinical findings, X-ray views, treatment, time of immobilization and healing, and prognosis. It is quite liberally illustrated by roentgenograms, diagrams, and brief anatomical reviews. The material is well organized and concisely presented.

This book is appropriate for a teaching handbook in basic principles of fracture care and is an excellent reference book for student teaching. The reviewer feels that the section on fractures of the hand will be most liable to criticism by orthopaedic surgeons.

The orthopaedist will find the book particularly helpful in teaching students, because the several acceptable methods of handling each type of fracture are briefly presented. This brevity, however, requires elaboration or clarification that can be accomplished to complete satisfaction only by personal instruction. By the same token this book will be inadequate for the novice without additional instruction.

The author is to be congratulated for adding a very worthwhile teaching aid to the orthopaedic literature.

Robert P. Holt, M.D.

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against **ROUNDWORMS**

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Brown, H. W.: J. Pediat. 45:419, 1954.

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Deaths

W. H. Campbell, M.D.
1871-1955

W. H. Campbell, M.D., pioneer state physician, died January 18 at an Oklahoma City rest home. Doctor Compbell had practiced in Comanche, Maud, Wilson, Seminole and for the past 10 years in Chickasha until his retirment last April because of ill health.

He was born in Randolph County, Ark., and graduated from Moore-Thompson Medical School in St. Louis in 1898. He began his practice in Comanche upon graduation from medical school

Doctor Campbell was a member of the Masonic Lodge and Church of Christ.

W. B. Smith, M.D.
1871-1955

W. B. Smith, M.D., pioneer Ottawa county physician and surgeon, died February 9 at his home in Joplin after an extended illness. Doctor Smith practiced at Fairland from 1903 until his retirement a few years ago.

Doctor Smith was an Air Force Lieutenant during World War I. He was a member of the First Christian Church of Miami and was a member of the Frisco Masonic Lodge of Fairland for more than 50 years.

James C. Matheney, M.D.
1880-1955

James C. Matheney, M.D., Okmulgee physician for 33 years, died January 20 after an illness of several months.

Doctor Matheney was born in Cooksville, Tennessee. After attending Branham and Hughes Training School, Springhill, Tenn., he taught school at Cedar Hill, Tenn., in 1904. Later he attended the University of Kentucky and received his M.D. from Vanderbilt University.

He first practiced at Erin Springs, moving to Lindsay six months later, then to Okmulgee in 1922. He was active in the state and county medical societies, Masons, Modern Woodmen of the World, Methodist Church and was a member of Beta Theta Pi and Phi Chi.

Survivors include the widow of the home address and three daughters.

Roy K. Goddard, M.D.
1884-1955

Roy K. Goddard, M.D., Skiatook physician since 1919, died January 24 in a Tulsa hospital. He had been in ill health for several years and suffered a cerebral hemorrhage January 11 from which he never regained consciousness.

He was a veteran of World War I, a former member of the Town Council, and a member of the Masonic Lodge at Woodward.

Surviving are his widow of the hone, one son, Roy K. Goddard, M.D., Skiatook, two brothers and one sister.

William S. Cary, M.D.
1881-1955

William S. Cary, M.D., long time western Oklahoma physician, died January 20 at his home in Reydon after a long illness.

Doctor Cary was born at Darlington, Wisconsin and graduated from Marquette University School of Medicine in 1915. He had practiced at Reydon since that time although the western Oklahoma community was known as Rankin when he settled there. He was a member of the Methodist church and the Masonic lodge.

Foot-so-Port Shoe Construction and its Relation to Center Line of Body Weight

1. The highest percent af sizes in the shae business are sald in Faat-sa-Part shaes ta the big men and wamen wha have faund that Faat-sa-Part canstruction is the strangest, because . . . . . .

- The patented arch suppart canstructian is guaranteed nat ta break dawn.
- Special heels are langer than mast anatamic heels and mointain the appearance af narmal shaes.
- Insale extensian and wedge at inner carner af the heel where suppart is most needed.
- Innersales are guaranteed nat ta crack, curl, ar callapse. Insulated by a special layer of Texon which alsa cushians firmly and unifarmly.

2. Faot-sa-Part lasts were designed ond the shae canstructian engineered with the assistance of many tap arthapedic dactars. We invite the members af the medical prafessian to wear a pair — prove to yourself these statements.

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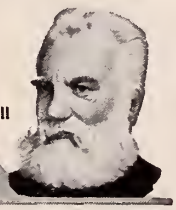
Only a long and distinguished ancestry of champions can produce a feline blueblood.

Only **audivox** in the hearing-aid field can trace an ancestry that includes both Western Electric and Bell Telephone Laboratories. **audivox** lineage springs from the pioneer experiments of Dr. Alexander Graham Bell, furthered by the development of the hearing aid at Bell Telephone Laboratories, brought to fruition by Western Electric and **audivox** engineers.



Alexander Graham Bell

audivox

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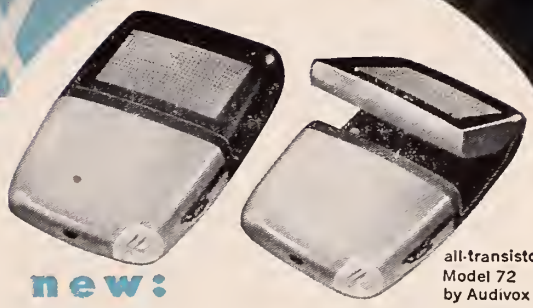

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MANY DOCTORS rely on career Audivox dealers for conscientious, prompt attention to their patients' hearing needs. There is an Audivox dealer — chosen for his interest, ability, and integrity — in your vicinity. He is listed in the Hearing Aid section of your classified telephone directory, under Audivox or Western Electric.

the blueblood of hearing aids

School of Medicine Postgraduate Courses

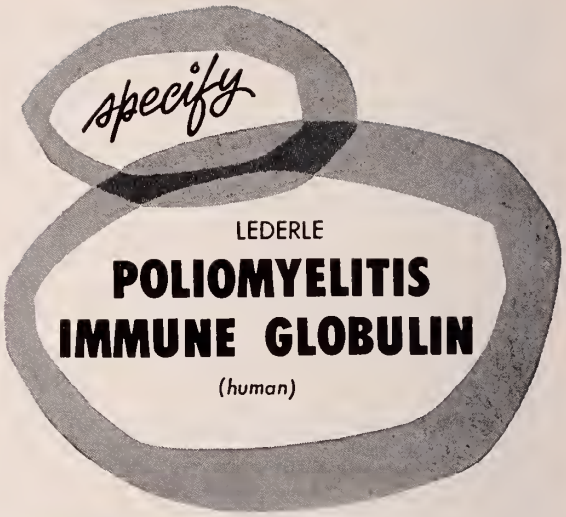
EYE, EAR, NOSE AND THROAT—March 17 and 18

The Oklahoma City Academy of Ophthalmology and Otolaryngology have chosen these dates for their annual course and meeting. An interesting program is planned during the above two days featuring as guest speakers Doctors Peter Kronfeld, Ophthalmologist from Chicago, Illinois and Doctor Albelt C. Stutsman, Otolaryngologist of St. Louis, Missouri. There will be a dinner meeting Friday night, March 18, followed by a paper given by each of the guest speakers.

Registration will be limited to Ophthalmologists and Otalaryngologists and their guests.

TRAUMA—April 1 and 2

The Department of Orthopedic and Fracture Surgery and the Regional Committee on Trauma of the American College of Surgeons will conduct a course on Trauma featuring a guest lecturer prominent in this field.



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Bermuda-Nassau Cruise To Follow AMA Meeting

An eight-day cruise to Bermuda and Nassau has been arranged for physicians and their wives following the A.M.A. meeting at Atlantic City in June.

The party will sail from New York at 7 p.m. Friday, June 10, aboard the Furness Line steamer Ocean Monarch. The ship docks early Sunday at St. George's Bermuda, for church services and a tour of the city. A sightseeing trip, a visit to Castle Harbour Hotel for tea and a calypso concert are set for the afternoon. On Monday morning a tour of Hamilton, the island's capital, is scheduled prior to sailing at 1 p.m.

Tuesday is spent at sea with a variety of programs planned — or the day can be used to rest up for Nassau — the next port of call. The party goes ashore at Nassau, capital of the Bahama Islands, early Wednesday. Beaches and cabanas of the British Colonial Hotel are available and a dinner dance will be held there that evening.

The ship leaves Nassau at midnight and the last two days of the tour are spent at sea — with the traditional gala party set for the last night aboard. The ship docks in New York at 9 a.m. Saturday, June 18.

All space is being held for the A.M.A. and reservations should be made immediately. For further information contact W. M. Moloney, Chicago, Burlington and Quincy Railroad, 105 West Adams St., Chicago.

AMA Announces Ratio of Doctors

A record ratio of one doctor for every 730 persons in the United States has been reached during the past year through the graduation of the largest class of physicians in history and the continued expansion of the nation's medical schools.

The ratio will be lowered even more in the next few years as the number of medical graduates is expected to rise more rapidly than the general population.

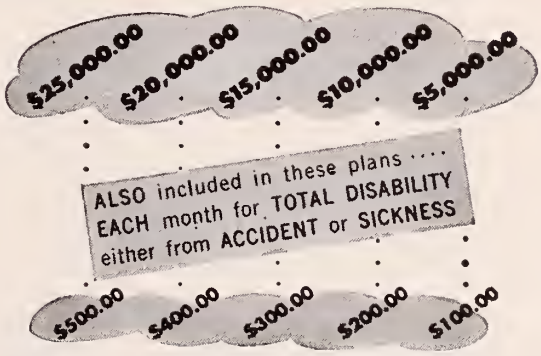
The record graduation of 6,861 doctors during 1953-1954 brings the nation's physician population to approximately 220,100.

This record graduation was announced in the 54th annual report on medical education in the United States by the American Medical Association.

Something NEW is Cooking

MORE INSURANCE NOW AVAILABLE

think! HOW THESE AMOUNTS WOULD HELP IN PAYING ESTATE TAXES IN CASE YOU ARE ACCIDENTALLY KILLED...



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(an income when disabled) for Oklahoma doctors.

This broad coverage, low cost plan is available through your Association Approved

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Editorials

Our Convention Speakers

The scientific excellence of the annual meetings of the Oklahoma State Medical Association has become traditional, and the 62nd Annual Meeting scheduled for May 9-11, 1955, at Tulsa is no exception. The panel of visiting distinguished guest speakers reads like a "Who's Who In American Medicine." Few *national* medical organizations will provide a comparative group of guest speakers for their national meetings this or any year. Of the 11 medical personalialities to visit Oklahoma, all are diplomates of their respective specialty boards. Six are now department heads at leading American medical colleges, while four others now hold or have held high faculty positions. Between them they have published nearly 500 scientific papers in leading medical journals as well as having written several standard textbooks. Five are editors or associate editors of popular specialty journals. The 11 guest speakers have been in practice a total of 300 years. Between them they hold memberships in nearly 150 medical organizations. One is President-Elect of the American Medical Association, and another in addition to being a distinguished physician, is recognized as America's foremost mountain climber. One is a nationally known authority on undersea life as well as a distinguished surgeon with a distinguished name.

These 11 men will travel approximately 25,000 miles to be guests at the 1955 Annual Meeting and will sacrifice 50 days of their time for this purpose. In addition, 12 Oklahoma doctors will appear on the program. The hours which have gone into the preparation of this program cannot be accurately computed. The net result, however, is a well balanced scientific program designed to meet the needs of the practicing physician of Oklahoma. To the latter it offers a splendid opportunity for post-graduate instruction by a distinguished faculty, as well as many delightful social interludes.

The 62nd Annual Meeting is a program which should draw the majority of Oklahoma doctors to Tulsa on May 9-11. Those who attend will profit by the talented presentations of the most modern techniques in diagnosis and therapy. Those who remain at home will have lost a splendid opportunity to add to their store of medical knowledge.

Y-All Come

The 62nd Annual Meeting of the Oklahoma State Medical Association convenes in Tulsa from May 8th through May 11th. Stories and announcements which have appeared in the past three issue of the *Journal* indicate the high character of the speakers. A quality which we have learned, from past pleasant experiences, to expect from the Tulsa meetings.

It is obvious that the titles announced have been carefully selected to cover recent advances of medicine in as broad a field as possible.

The 10 papers to be presented by our own Oklahoma doctors were chosen from some 40 splendid manuscripts submitted to the Scientific Work Committee. Our pride in the high caliber of all of these manuscripts is tempered only by regret that, because of time limitation, so many of them had to be omitted.

The *Journal* salutes Chairman W. E. Brown and his committee members for lining up three full days of lectures, exhibits and scientific motion pictures in which are packed a splendid "short course" in post graduate medical education for both the general practitioner and the specialist.

It is good professional business to take time out and be in Tulsa May 9-11 to learn first hand what new advances medicine has made in the past year.

An Invitation

Plan to attend the buffet dinner in the Blue Cross and Blue Shield building Monday evening, May 9th if you attend the 62nd Annual Meeting. An interesting program has been arranged for you and also your wife if she accompanies you.

This also affords an opportunity for you —for some the first opportunity—to visit the new headquarters offices of the Oklahoma Blue Cross and Blue Shield Plans.

It takes machines, equipment, systems, procedures and 160 people to operate a business of the scope now covered by the Plans. You won't be seeing "just another building." It's well worth the small amount of time it takes to learn at first hand how the headquarters office operates.

The Trustees, who give freely of their time, without pay, to direct the policy matters of the Plans are anxious for every physician in Oklahoma to become better acquainted with the activities now performed by Blue Cross and Blue Shield.

Only through understanding—can Blue Cross-Blue Shield continue to create the structure of public service which they are striving to build.

Both Plans celebrated an anniversary in April of this year—the 15th for Oklahoma Blue Cross; the 10th for Oklahoma Blue Shield. See you there!!-

Related Meetings

Oklahoma Radiological Society
Sunday, May 8, 1955, 3:00 p.m., French Room, The Mayo. Guest speaker, Juan A. del Regato, M.D., Director, Penrose Cancer Hospital and Associate Professor of Radiology, University of Colorado Medical School, Colorado Springs, Colorado.

Oklahoma Chapter, American College of Chest Physicians
Sunday, May 8, 1955, 1:30 p.m., Room A, The Mayo. Program will include surgical treatment of pulmonary lesions, chemotherapy of tuberculosis, and presentation of chest films by members.

Oklahoma State Anesthesiology Society
Sunday, May 8, 1955, 10:00 a.m., Studio Room, The Mayo. Guest speaker, Robert A. Hingson, M.D., Professor of Anesthesiology, Western Reserve University School of Medicine, Cleveland, Ohio.

Arthritis and Rheumatism Foundation of Oklahoma
Sunday, May 8, 1955, 9:30 a.m., Terrace Room, The Mayo.

Oklahoma State Urological Association
Saturday, May 7, 1955, 9:30 a.m., Metropolitan Room, The Mayo. Guest speaker, William W. Scott, M.D., Chairman of the Department of Urology, Johns Hopkins University School of Medicine, Baltimore, Maryland.

Oklahoma Medical Technologists Association
Saturday and Sunday, May 7-8, 1955, Emerald Room, The Mayo.

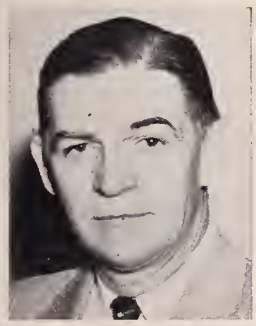
Oklahoma Association of Pathologists
Sunday, May 8, 1955, Conference Dining Room, Hillcrest Medical Center, 10:00 a.m., Tumor Slide Seminar. Guest speaker, Arthur Purdy Stout, M.D., Emeritus Professor of Surgical Pathology, Columbia University College of Physicians and Surgeons, New York, N. Y.

Oklahoma Orthopedic Association
Sunday, May 8, 1955, 2:30 p.m., Auditorium, Nursing Home, St. John's Hospital. Guest speaker, James K. Stack, M.D., Associate Professor of Bone and Joint Surgery, Northwestern University School of Medicine, Chicago, Illinois.

Oklahoma State Medical Assistants Society
Friday, May 6 through Sunday, May 8, 1955, Hotel Tulsa.

Officers and Councilors

OKLAHOMA STATE MEDICAL ASSOCIATION



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Delegates to the A.M.A.—John F. Burton, M.D., Oklahoma City; James Stevenson, M.D., Tulsa

Alternate Delegates to the A.M.A.—Malcom Phelps, M.D., El Reno; E. H. Shuller, M.D., McAlester

Speaker of the House of Delegates—Clinton Gallaher, M.D., Shawnee

Vice-Speaker of the House of Delegates—W. Keiller Haynie, M.D., Durant

District No. 1: Craig, Delaware, Mayes, Nowata, Ottawa, Rogers, Washington
Councilor (1956)_____F. S. Etter, M.D., Bartlesville
Vice-Councilor (1956)____J. E. Highland, M.D., Miami

District No. 2: Kay, Noble, Osage, Pawnee, Payne
Councilor (1957)_____E. C. Mohler, M.D., Ponca City
Vice-Councilor (1957)_____
_____Glen McDonald, M.D., Pawhuska

District No. 3: Garfield, Grant, Kingfisher, Logan
Councilor (1955)_____C. M. Hodgson, M.D., Kingfisher
Vice-Councilor (1955)____Wm. P. Neilson, M.D., Enid

District No. 4: Alfalfa, Beaver, Cimarron, Ellis, Harper, Major, Texas, Woods, Woodward
Councilor (1956)
Vice-Councilor (1956)___Joe L. Duer, M.D., Woodward

District No. 5: Beckham, Blaine, Canadian, Custer, Dewey, Roger Mills
Councilor (1957)_____A. L. Johnson, M.D., El Reno
Vice-Councilor (1957)_____Ross Deputy, M.D., Clinton

District No. 6: Oklahoma
Councilor (1955)_____
_____Elmer Ridgeway, Jr., M.D., Oklahoma City
Vice-Councilor (1955)_____
_____P. E. Russo, M.D., Oklahoma City

District No. 7: Cleveland, Creek, Lincoln, Okfuskee, Pottawatomie, Seminole
Councilor (1956)_____Paul Gallaher, M.D., Shawnee
Vice-Councilor (1956)_____
_____Charles A. Smith, M.D., Norman

District No. 8: Tulsa
Councilor (1957)_____Wilkie Hoover, M.D., Tulsa
Vice-Councilor (1957)__Wendell L. Smith, M.D., Tulsa

District No. 9: Adair, Cherokee, McIntosh, Muskogee, Okmulgee, Sequoyah, Wagoner
Councilor (1955)_____F. R. First, Jr., M.D., Checotah
Vice-Councilor (1955)_____
_____I. W. Bollinger, M.D., Henryetta

District No. 10: Haskell, Hughes, Latimer, LeFlore, Pittsburg
Councilor (1956)_____Paul Kernek, M.D., Holdenville
Vice-Councilor (1956)____C. D. Lively, M.D., McAlester

District No. 11: Atoka, Bryan, Choctaw, Coal, McCurtain, Pushmataha
Councilor (1957)_____A. T. Baker, M.D., Durant
Vice-Councilor (1957)_____T. E. Rhea, M.D., Idabel

District No. 12: Carter, Garvin, Johnston, Love, Marshall, McClain, Murray, Pontotoc
Councilor (1955)_____J. H. Veazey, M.D., Ardmore
Vice-Councilor (1955)_____W. T. Gill, M.D., Ada

District No. 13: Caddo, Comanche, Cotton, Grady, Jefferson, Stephens
Councilor (1956)_____H. M. McClure, M.D., Chickasha
Vice-Councilor (1946)_____J. B. Miles, M.D., Anadarko

District No. 14: Greer, Harmon, Jackson, Kiowa, Tillman, Washita
Councilor (1957)_____J. B. Hollis, M.D., Mangum
Vice-Councilor (1957)____R. R. Hannas, M.D., Sentinel

Association Activities

PRESIDENT'S LETTER

For months we have heard the complaints from many sources, both within and without the profession, of the inability of the Board of Medical Examiners to control or expel undesirable practitioners. We have been goaded from every side to rid the profession of the minute minority of doctors who bring upon the profession the majority of the complaints against it.

In the past it has seemed, to most of us, that there has been laxity in the investigation and prosecution of these individuals. There are two sides to any given problem. The Board of Medical Examiners have stated that at times it has been very difficult to get county attorneys to prosecute offenders. The county attorneys have replied that often the doctors in their communities are either disinterested or unwilling to aid in any prosecution and do not, as a rule, appreciate the efforts expended in their behalf. This has left the Board severely handicapped, because of lack of personnel, to carry out adequate investigation, and insufficient power to obtain good testimony.

We hope that most of the difficulties will now be solved. At the instigation of the Board of Medical Examiners, the present legislature of our state has recently passed a bill which will enable the Board to subpoena witnesses and obtain testimony under oath. The law permitting such a procedure will increase the effectiveness of the Board and hasten the prosecution of many cases that heretofore would have gone untried.

Bruce R Harrison

President

P.S. It is hoped that, if at all possible, every doctor will avail himself of the opportunity of attending the meeting of the State Medical Association in Tulsa next month. The program committee has obtained an excellent group of speakers for the meeting.

Oklahoma State Medical Association

Oklahoma City, Oklahoma

INCOME AND EXPENSE STATEMENT

January 1, 1954 — December 31, 1954

INCOME		EXHIBIT "B"
Dues		$60,513.99
United States Bond Interest		167.50
Annual Meeting		7,225.65
Journal		23,231.19
History of Medicine Appropriation		500.00
Miscellaneous		716.12
		92,354.45
EXPENDITURES		
Office Expense	$37,666.51	
Annual Meeting	11,266.49	
Journal	24,554.00	
Public Policy Committee	1,439.75	
Public Health Committee	630.73	
Legal Expense	1,100.00	
Travel—Out of State	4,338.57	
History of Medicine—University of Oklahoma	253.49	
Depreciation	987.65	
Retirement Pension Plan	3,334.69	85,571.88
INCOME OVER EXPENSE		6,782.57

BALANCE SHEET

December 31, 1954

ASSETS

		EXHIBIT "A"
CURRENT ASSETS		
Cash in Bank		$37,636.65
FIXED ASSETS		
Furniture and Fixtures	11,458.38	
Less Reserve for Depreciation	3,771.79	7,686.59
INVESTMENTS		
United States Treasury Bonds	12,398.88	
Ponca City Building and Loan Association	10,000.00	22,398.88
DEFERRED ASSETS		
Employees Retiremend Fund—Contra		6,942.97
TOTAL ASSETS		$74,665.09

LIABILITIES AND NET WORTH

ACCRUED LIABILITIES		
Withholding Tax	314.17	
Social Security	60.00	
Retirement Fund—Employees Contribution	1,166.95	1,541.12
Reserve for Employees Retirement Fund—Contra		6,942.97
Net Worth		$66,181.00
TOTAL LIABILITIES AND NET WORTH		$74,665.09

Special Dinner Program

For the entertainment of visiting Oklahoma doctors, their wives and guests, the Oklahoma State Medical Association has arranged a delightful program for Monday evening, May 9th, in the beautiful new Blue Cross-Blue Shield Building of Tulsa.

Doctors will be the guests of the Blue Cross-Blue Shield Plans of Oklahoma at a delicious complimentary buffet dinner to be served in the Auditorium of the Blue Cross-Blue Shield Building. Members and their guests will have an opportunity of touring the new headquarters building.

PROGRAM

7:00 p.m. Tour of the Blue Cross-Blue Shield Building. Members of the Blue Cross-Blue Shield Plans will serve as guides.

7:30 p.m. Complimentary Buffet Dinner, Auditorium.

8:30 p.m. Dr. Ralph A. McGill, Tulsa, Presiding.
Address of Welcome. Mr. N. D. Helland, Executive Director, Blue Cross-Blue Shield Plans of Oklahoma.
The best in barbershop harmonies by the Gay Notes, Oklahoma's leading barbershop quartet.

9:00 p.m. Address of the Evening. K-2 THE SAVAGE MOUNTAIN. Charles S. Houston, M.D., Exeter, New Hampshire.

Doctor Houston

Dr. Charles S. Houston of Exeter, New Hampshire, is one of the world's foremost mountain climbers. A prominent internist and research scientist, he has led several American expeditions to the forbidding Himalayas. He was the first to climb Mount Crillon and Mount Foraker in Alaska and has climbed most of the difficult Swiss Alpine peaks. In 1936 he was part-organizer of the Anglo-American expedition which climbed Nanda Devi, 25,660 foot peak, then the highest summit yet climbed. In 1938 he made his first attempt on K-2, the second highest mountain in the world. Two years later he led a reconnaissance expedition to Mount Everest and explored the unknown South Face. These explorations contributed materially to the successful ascent of the mountain in 1953. Dr. Houston was leader of the Third American Karakoram Expedition to K-2 in 1953, and only a tragic accident kept his team from making the summit of the gigantic peak.

Oklahoma doctors will find his beautiful color motion pictures and entrancing account of "K-2, The Savage Mountain" an exciting entertainment experience Dr. Houston will brief the story of the attempt upon K-2 as contained in his new best seller published by McGraw-Hill. His address promises to be an unusual feature of the 62nd Annual Meeting of the Oklahoma State Medical Association.

President's Inaugural Dinner Dance

TUESDAY, MAY 10, 1955

Crystal Ballroom

Mayo Hotel

6:00 p.m. SOCIAL HOUR, Open Parlors and Emerald Room, Mezzanine, The Mayo. Compliments of the Tulsa County Medical Society.

7:00 p.m. DINNER, Crystal Ballroom, The Mayo.

PROGRAM

Introduction of Guests and Officers
Inaugural of R. Q. Goodwin, M.D., Oklahoma City, as President
"My Life in the Polish Underground," Countess Maria Pulaski, New York, N. Y.

9:00 p.m. DANCING to the Music of Russ Morgan and His Orchestra. Until 1:00 a.m., Crystal Ballroom, The Mayo.

Russ Morgan

Countess Maria Pulaski . . .

Author, lecturer, traveler, and stylist, Countess Maria Pulaski was one of Warsaw's best known designers at the outbreak of World War II. As an underground agent for the Polish resistance, she channeled vital military information to American and British espionage officers. Her new book, "I Was A Spy For The Polish Underground," published in New York last fall, has been a popular best-seller for several months. Her witty and sparkling account of espionage in Nazi-occupied Poland has entertained thousands from coast to coast. As guest speaker for the Annual Banquet of the Oklahoma State Medical Association, she will provide Oklahoma doctors with a delightful half-hour of interesting reminiscences.

Reservations . . .

Tickets to the President's Inaugural Dinner Dance are limited to the capacity of the Crystal Ballroom. The price is $6.50 per person, including social hour, steak dinner, inaugural program, the Countess Pulaski lecture, and the Russ Morgan dance. Tickets may be purchased in advance by writing the Tulsa County Medical Society, B9 Medical Arts Building, Tulsa. Checks should be made payable to "Oklahoma State Medical Association." Tickets will be mailed by return mail. Dinner dance tickets will also be available at the Registration Desk at the Cimarron Ballroom as long as they last.

Russ Morgan and His Orchestra . . .

Russ Morgan and his "Music in the Morgan Manner" will provide four hours of dancing for Oklahoma doctors and their guests. At 21, Russ Morgan was an arranger for John Philip Sousa and Victor Herbert. His Decca records sold over 2,000,000 copies in one year alone, and he has been seen in motion pictures for Warner Brothers, Paramount, Universal-International, and other studios. On NBC and as star of Admiral's "In the Morgan Manor," popular television show, Morgan has featured his own compositions (including the famous theme, "Does Your Heart Beat for Me"?) and special rhythms.

General Information

HOTEL ACCOMODATIONS

Desirable hotel accommodations for the 62nd Annual Meeting of the Oklahoma State Medical Association may be obtained by returning the reservation form to be found in this issue of the *Journal*. Do not write hotels direct. Reservations must be made with the Hotels Committee, Oklahoma State Medical Association, B9 Medical Arts Building, Tulsa, Oklahoma. Please give first, second and third choice of hotels. Reservations will be filled in the order received and a confirmation will be mailed directly from the hotel. Please state date of arrival, date of departure, and type of accommodation desired (single, double, twin bedroom, suite, etc.). The Mayo will be the headquarters hotel. Due to the size of the convention, not all visitors can be quartered at The Mayo, but desirable accommodations are available in many other attractive Tulsa hotels.

REGISTRATION

Registration will open Monday, May 9, 1955, at 8:30 A.M. at the Cimarron Ballroom. Delegates and others may register on Sunday, May 8, on the Mezzanine of The Mayo from 12:00 Noon to 5:00 P.M. Each physician will be required to present his 1955 membership card in the Oklahoma State Medical Association. Dues for 1955 will be accepted only from the secretaries of the various county medical societies. Guest privileges will be accorded interns, residents, medical officers of the armed forces, and physicians who are members of state medical associations in other states. Registration will be open daily from 8:30 A.M. to 5:00 P.M., Monday and Tuesday, and from 8:30 A.M. to 12:00 Noon on Wednesday.

RELATED MEDICAL MEETINGS

Several medical specialty organizations and allied medical groups are planning annual meetings immediately before or during the 62nd Annual Meeting of the Oklahoma State Medical Association. Meeting schedules of these groups may be found elsewhere in this issue of the *Journal*.

HOUSE OF DELEGATES

The House of Delegates of the Oklahoma State Medical Association will meet Sunday, May 8, 1955, at 1:00 P.M. in the Ivory Room of The Mayo. Delegates and alternates must present their credentials card to the Credentials Committee prior to assuming their seats. A special section will be reserved for members of the Oklahoma State Medical Association, who are invited to attend as spectators. Dr. Elmer Hess of Erie, Pennsylvania, President-Elect of the American Medical Association, will be a special guest and will address the House of Delegates at the afternoon session.

ROUNDTABLE LUNCHEONS

Roundtable luncheons will be held at 12:30 P.M., Monday and Tuesday, May 9 and 10, in the Emerald Room of The Mayo. Questions will be received from the floor for answer by the panel of visiting distinguished guest speakers. Tickets will be $2.50 per person and should be purchased immediately upon registration.

GOLF TOURNAMENT

The Pfizer Golf Tournament, sponsored by the Oklahoma State Medical Association, will be held Wednesday, May 11, 1955, at the downtown Tulsa Country Club. Participants will be guests at a complimentary social hour and buffet dinner tendered by Pfizer Laboratories. Special prizes and trophies will be awarded. Golfing begins at 12:00 Noon, and the social hour will be at 6:30 p.m. Dinner will be served at 7:15 p.m. Reservations for this event may be made by writing the Golf Committee, Oklahoma State Medical Association, B9 Medical Arts Building, Tulsa, or at the Pfizer booth. Reservations are necessary. There will be no charge for the Golf Tournament except for caddy fees.

PAST-PRESIDENTS BREAKFAST

The Annual Past-Presidents Breakfast of the Oklahoma State Medical Association, honoring former officers of the Association, will be held Tuesday morning, May 10, 1955, in the Auditorium of Blue Cross-Blue Shield Plan Building, 1215 South Boulder, Tulsa. All Past-Presidents are urged to attend.

Distinguished Guest Speakers

WALTER C. ALVAREZ, M.D.
Chicago, Illinois

Professor of Medicine, University of Illinois School of Medicine. Medical Degree, Cooper Medical College. Formerly Professor of Medicine, Mayo Clinic Foundation, Rochester, Minnesota. Editor-In-Chief, Modern Medicine. Editor-In-Chief, Geriatrics. Associate Editor, Gastroenterology. Author of more than 900 scientific medical articles, several textbooks, and a popular medical column appearing in several hundred American newspapers. Diplomate, American Board of Internal Medicine. Fellow, American College of Physicians. Member, American Society for Clinical Investigation. Member, American Gastroenterology Association. Member, American Physiological Society.

Sponsors: E. G. Hyatt, M.D., Tulsa, and Robert G. Tompkins, M.D., Tulsa.

ELMER HESS, M.D.
Erie, Pennsylvania

Pres. - Elect, American Medical Association. Nationally known specialist in Urology. Medical Degree, University of Pennsylvania. Postgraduate training in Urology at Johns Hopkins University. Chief of Urology, St. Vincent's Hospital, Erie, Pennsylvania. Diplomate, American Board of Urology. Fellow, American College of Surgeons. Fellow, International College of Surgeons. Fellow, International Academy of Medicine. Editor and publisher, *Urolog*. Member of the Board of Trustees, American Medical Association, since 1937. Member, World Medical Association. Member, Canadian Medical Association.

Sponsors: John F. Burton, M.D., Oklahoma City, and John E. McDonald, M.D., Tulsa.

JUAN A. DEL REGATO, M.D.
Colorado Springs, Colorado

Director, Penrose Cancer Hospital. Associate Professor of Clinical Radiology, University of Colorado School of Medicine. Medical Degree, University of Paris. Diplomate, American Board of Radiology. Fellow, American College of Radiology. Member, Radiological Society of North America. Member, American Roentgen Ray Society. Member, American Radium Society. Consultant to the Los Alamos Medical Center, Los Alamos, New Mexico. Honorary member of twelve radiological societies in Central and South America. Laureate, National Academy of Medicine of France. United States Counselor, Colegio Inter-Americano de Radiologia.

Sponsor: Lucien M. Pascucci, M.D., Tulsa.

GEORGE CRILE, JR., M.D.
Cleveland, Ohio

Surgeon, The Cleveland Clinic. Medical Degree, Harvard Medical School. Intern and Resident Training at Barnes Hospital of St. Louis, Cleveland Clinic Foundation, and Roosevelt Hospital of New York. Commander, United States Navy Medical Corps, World War II. Fellow, American College of Surgeons. Diplomate, American Board of Surgery. Consultant to the Surgeon General, United States Navy. Member, American Goitre Association. Member, American Surgical Association. Member, Central Surgical Society. Member, Southern Surgical Association. Nationally known authority and writer on skin diving and undersea life.

Sponsors: Hays R. Yandell, M.D., Tulsa, and Thomas J. Hardman, M.D., Tulsa.

CHARLES S. HOUSTON, M.D.
Exeter, New Hampshire

Internal Medicine. Medical Degree, Columbia University College of Physicians and Surgeons. Intern and Resident Training, Presbyterian and Bellevue Hospitals of New York. Diplomate, American Board of Internal Medicine. Lieutenant-Commander and Flight Surgeon, United States Navy Medical Corps, World War II, assigned to high altitude and acclimization studies, Naval Air Forces. Internationally known mountain climber, first man to climb Nandi Devi, member of two expeditions to K-2 in 1938 and 1953, member of the Everest reconnaisance expedition of 1950, leader of the Third American Karakoram Expedition of 1953, author and editor.

Sponsors: Walter E. Brown, M.D., Tulsa, and Mr. Jack Spears, Tulsa.

JOHN L. PARKS, M.D.
Washington, D.C.

Chairman of the Department of Obstetrics and Gynecology, George Washington University School of Medicine. Medical Degree, University of Wisconsin. Intern and Resident Training, University of Madison, Wisconsin, and Gallinger Municipal Hospital, Washington, D.C. Diplomate, American Board of Obstetrics and Gynecology. Fellow, American College of Surgeons. Member, American Gynecological Society. Member, American Association of Obstetricians, Gynecologists, and Abdominal Surgeons. Member, Central Association of Obstetricians and Gynecologists. Chief of Obstetrics and Gynecology, George Washington University Hospitals.

Sponsors: Charles Ed White, M.D., Muskogee, and Dixon N. Burns, M.D., Tulsa.

ROBERT B. LAWSON, M.D.
Miami, Florida

Chairman of the Department of Pediatrics, University of Miami School of Medicine. Medical Degree, Harvard Medical School. Editor - In - Chief, American Journal of Diseases of Children. Member of the Board of Trustees, American Board of Pediatrics. Member, American Academy of Pediatrics. Member, American Pediatric Society. Member, Society For Pediatric Research. Formerly Associate Professor of Pediatrics, Duke Medical School, and formerly Chairman of the Department of Pediatrics, Bowman-Gray Medical School. Pediatrician-In-Chief, Jackson Memorial Hospital of Miami. Formerly Fellow in Filterable Viruses, National Research Council, 1945.

Sponsors: G. R. Russell, M.D., Tulsa, and Loren V. Miller, M.D., Tulsa.

WILLIAM W. SCOTT, M.D.
Baltimore, Maryland

Chairman of the Department of Urology, Johns Hopkins University School of Medicine. Urologist-In-Charge, Johns Hopkins Hospitals. Medical Degree, University of Chicago School of Medicine. Intern and Resident Training, University of Chicago Hospitals and Johns Hopkins Hospitals. Diplomate, American Board of Urology. Member, American Urological Association. Member, American Association of Genito-Urinary Surgeons. Member, American Physiological Association. Member, American Society For The Study of Sterility. Gold Medal, American Medical Association, 1940. Research studies in prostatic cancer and physiology of the prostate gland.

Sponsors: Berget H. Blocksom, M.D., Tulsa, and Henry S. Browne, M.D., Tulsa.

WILLIAM A. SODEMAN, M.D.
Columbia, Missouri

Chairman of the Department of Medicine, University of Missouri School of Medicine. Medical Degree, University of Michigan. Intern and Resident Training, St. Vincent's Hospital of Toledo and Charity Hospital of New Orleans. Formerly Chairman of the Department of Preventive Medicine, Tulane University School of Medicine. Formerly Henderson Professor of Tropical Diseases, Tulane University. Diplomate, American Board of Internal Medicine. Fellow, American College of Physicians. Member, American Society For Clinical Investigation. Author of 120 scientific papers and textbooks, principally in the field of cardiology, tropical diseases, etc.

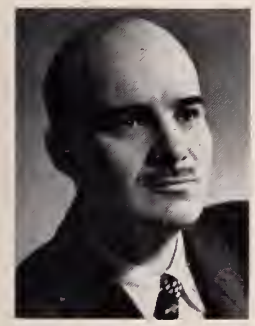
Sponsors: S. C. Shepard, M.D., Tulsa, and William S. Jacobs, M.D., Tulsa.

ARTHUR PURDY STOUT, M.D.
New York, N.Y.

Professor of Surgery Emeritus and Professor of Pathology, Columbia University College of Physicians and Surgeons. Medical Degree, Columbia University College of Physicians and Surgeons. Intern and Resident Training, Roosevelt Hospital of New York. Diplomate, American Board of Pathology. Chairman on Oncology, National Research Council. Member, American Association For Cancer Research. Member, Committee on Education, American Cancer Society. Member, National Cancer Institute. Consulting Pathologist to Presbyterian and Francis Delafield Hospitals of New York. Author and editor of numerous papers on surgical pathology, cancer, etc.

Sponsors: Leo Lowbeer, M.D., Tulsa, and Vance Lucas, M.D., Tulsa.

JAMES K. STACK, M.D.
Chicago, Illinois



Associate Professor of Bone and Joint Surgery, Northwestern University Medical School. Medical Degree, Northwestern University Medical School. Intern and Resident Training at St. Vincent's and Bellevue hospitals of New York. Diplomate, American Board of Surgery. Attending Surgeon, Passavant and Cook County Hospitals of Chicago. Fellow, American College of Surgeons. Secretary, American Association For The Surgery of Trauma. Diplomate, National Board of Medical Examiners. Member, Central Surgical Association. Member, Association of Railroad Surgeons. Commander, United States Navy Medical Corps, World War II.

Sponsors: Worth M. Gross, M.D., Tulsa, and Alfred H. Bungardt, M.D., Tulsa.

MESSAGE CENTER

A complete message center service will be provided for your convenience at the Annual Meeting in Tulsa May 9-11. This message center is a service of the Oklahoma City Chapter of the Medical Service Society of America. The service will handle your incoming calls and every effort will be made to locate you as rapidly as possible upon receipt of a call. It will also assist you in locating other registered members and guests.

Each O.S.M.A. member will receive a card soon listing the telephone numbers of the message center. Please leave this at your office so that your office will know how to reach you.

Scientific Program

MONDAY, *May 9, 1955*

Cimarron Ballroom

BRUCE HINSON, M.D., Enid, Presiding

9:00 a.m. OPERATIVE OBSTETRICS
John L. Parks, M.D., Washington, D.C.

9:30 a.m. TREATMENT OF CARCINOMA OF THE CERVIX
Juan A. del Regato, M.D., Colorado Springs, Colorado

10:10 a.m. HINTS IN THE TREATMENT OF NERVOUS PERSONS
Walter C. Alvarez, M.D., Chicago, Illinois

10:50 a.m. THE USE AND ABUSE OF ULTRA-RADICAL SURGERY FOR CANCER
George Crile, Jr., M.D., Cleveland, Ohio

11:30 a.m. THE RELATION OF BENIGN LESIONS OF THE BREAST TO CANCER
Arthur Purdy Stout, M.D., New York, N.Y.

12:30 p.m. ROUNDTABLE LUNCHEON, Emerald Room, The Mayo. Participants: Drs. Crile, Stout, Alvarez, del Regato, Parks. Wendell L. Smith, M.D., Tulsa, Presiding.

JAMES W. KELLEY, M.D., Tulsa, Presiding

2:15 p.m.—MUMPS, MENINGO-ENCEPHALITIS IN CHILDREN
H. J. Rubin, M.D., Tulsa

2:35 p.m. DO CHILDREN ALWAYS NEED TREATMENT?
Robert B. Lawson, M.D., Miami, Florida

3:15 p.m. ADRENAL CORTICAL TUMORS
William W. Scott, M.D., Baltimore, Maryland

3:55 p.m. CHANGING TRENDS IN ABDOMINAL SURGERY
George Crile, Jr., M.D., Cleveland, Ohio

4:35 p.m. THE CARDIAC IN INDUSTRY—PROBLEMS AND POSSIBLE SOLUTIONS
Camp S. Huntington, M.D., Bartlesville, and William Best Thompson, M.D., Oklahoma City

7:00 p.m. SPECIAL DINNER PROGRAM, Blue Cross-Blue Shield Building, 1215 South Boulder. Buffet Dinner, compliments of the Blue Cross-Blue Shield Plans of Oklahoma. Entertainment.

K-2: THE SAVAGE MOUNTAIN
Charles S. Houston, M.D., Exter, New Hampshire

TUESDAY, *May 10, 1955*

Cimarron Ballroom

R. Q. GOODWIN, M.D., Oklahoma City, Presiding

9:00 a.m. SEXUAL INEQUALITIES AND THEIR MANAGEMENT
Joseph W. Kelso, M.D., Oklahoma City

9:20 a.m. MANAGEMENT OF OVARIAN TUMORS
John L. Parks, M.D., Washington, D.C.

10:00 a.m. REFRACTORY HEART FAILURE
William A. Sodeman, M.D., Columbia, Missouri

10:40 a.m. Intermission

10:50 a.m. ANATOMIC AND FUNCTIONAL ALTERATIONS IN THE CARPUS FOLLOWING INJURY AND EXCISION
James K. Stack, M.D., Chicago, Illinois

11:30 a.m. DETECTION OF LATENT CARCINOMA OF THE PROSTATE BY OPEN PERINEAL BIOPSY
Arthur Purdy Stout, M.D., New York, N.Y.

12:30 p.m. ROUNDTABLE LUNCHEON, Emerald Room, The Mayo. Participants: Drs. Lawson, Stack, Sodeman, Scott. Wilkie D. Hoover, M.D., Tulsa, Presiding

WALTER E. BROWN, M.D., Tulsa, Presiding

2:15 p.m. THE DIAGNOSIS OF POST BULBAR ULCERS OF THE DUODENUM
Sol Wilner, M.D., Tulsa

2:35 p.m. HINTS IN THE DIAGNOSIS OF FUNCTIONAL DIGESTIVE DISORDERS
Walter C. Alvarez, M.D., Chicago., Illinois

3:15 p.m. PROSTATIC CANCER
William W. Scott, M.D., Baltimore, Maryland

3:55 p.m. USE OF ANTIBIOTICS IN CHILDREN
Robert B. Lawson, M.D., Miami, Florida

4:35 p.m. RADIOIODINE IN THE DIAGNOSIS AND MANAGEMENT OF THYROID DISORDERS
Henry H. Turner, M.D., Oklahoma City

6:00 p.m. PRESIDENT'S INAUGURAL DINNER DANCE, The Mayo

WEDNESDAY, *May 11, 1955*

Cimarron Ballroom

FRANK J. NELSON, M.D., Tulsa, Presiding

9:00 a.m. THE USE OF ALEVAIRE AND INTERMITTENT POSITIVE PRESSURE OXYGEN THERAPY IN THE TREATMENT OF ASTHMA AND EMPHYSEMA
George L. Winn, M.D., Oklahoma City

9:20 a.m. TRACHEOTOMY: INDICATIONS, TECHNIQUE, AND AFTERCARE
Robert M. Shepard, Jr., M.D., Tulsa

9:40 a.m. RADIOACTIVE GOLD IN THE PLEURAL AND PERITONEAL CAVITIES
Peter E. Russo, M.D., Oklahoma City

10:00 a.m. Intermission

10:10 a.m. THE PROBLEM OF THE PAINFUL SPINE
William K. Ishmael, M.D., Oklahoma City

10:30 a.m. IS PERFECT APPROXIMATION A NECESSARY GOAL IN FRACTURE MANAGEMENT?
James K. Stack, M.D., Chicago, Illinois

11:10 a.m. SELECTION AND INTERPRETATION OF LIVER FUNCTION TESTS
William A. Sodeman, M.D., Columbia, Missouri

11:50 a.m. MANAGEMENT OF ESOPHAGEAL OBSTRUCTION BY MEAT BOLUS
C. K. Holland, M.D., McAlester, and Allen Greer, M.D., Oklahoma City

12:00 Noon THE PFIZER GOLF TOURNAMENT, Sponsored by the Oklahoma State Medical Association, Tulsa Country Club. Social Hour, 6:00 p.m. Dinner and Awarding of Prizes, 7:00 p.m. Simon Pollack, M.D., Tulsa, Presiding

Annual Meeting Committees

General Chairman:

James W. Kelley, M.D.

Social Events:

Jack L. Richardson, M.D., Chairman
H. J. Rubin, M.D.
Robert Hall Johnson, M.D.
William F. Boyer, M.D.
Dixon N. Burns, M.D.
W. Carl Lindstrom, M.D.
Vincel Sundgren, M.D.

Hotels and Registration:

Rayburne W. Goen, M.D., Chairman
Carl H. Guild, Jr., M.D.
Dean C. Walker, M.D.
Ben F. Gorrell, M.D.
Robert T. Cronk, M.D.
Gerald E. Cronk, M.D.

Publicity and Press Relations:

E. N. Lubin, M.D., Chairman
D. L. Edwards, M.D.
J. D. Shipp, M.D.
Carl C. Morgan, Jr., M.D.
Manuel Brown, M.D.
Hugh Perry, M.D.

Golfing:

Simon Pollack, M.D., Chairman
E. Malcolm Stokes, M.D.
Charles G. Stuard, M.D.
William F. Thomas, Jr., M.D.
Paul N. Atkins, Jr., M.D.
Henry S. Browne, M.D.
Charles E. Wilbanks, M.D.

Commercial Exhibits:

Richard E. McDowell, M.D., Chairman
William C. Pratt, M.D.
Robert G. Perryman, M.D.
William S. Jacobs, M.D.
C. S. Lewis, Jr., M.D.
H. Kenneth Ihrig, M.D.

Scientific Work Committee:

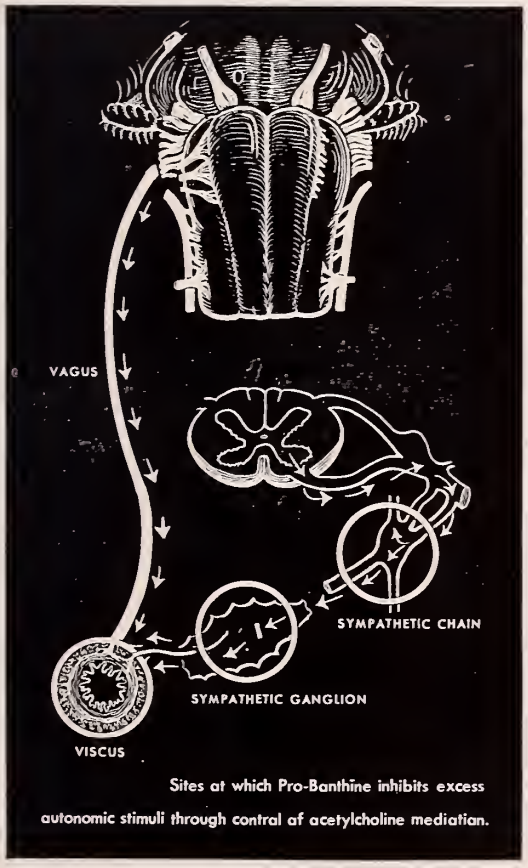
Walter E. Brown, M.D., Chairman
Earl I. Mulmed, M.D.
Thomas J. Hardman, M.D.
James B. Thompson, M.D.
E. G. Hyatt, M.D.
Wendell L. Smith, M.D.

A Combined Neuro-Effector and Ganglion Inhibitor

Pro-Banthīne consistently controls gastrointestinal hypermotility and spasm and the attendant symptoms.

Pro-Banthine is an improved anticholinergic compound. Its unique pharmacologic properties are a decided advance in the control of the most common symptoms of smooth muscle spasm in all segments of the gastrointestinal tract.

By controlling excess motility of the gastrointestinal tract, Pro-Banthine has found wide use[1] in the treatment of peptic ulcer, functional diarrheas, regional enteritis and ulcerative colitis. It is also valuable in the treatment of pylorospasm and spasm of the sphincter of Oddi.



Sites at which Pro-Banthine inhibits excess autonomic stimuli through control of acetylcholine mediation.

Roback and Beal[2] found that Pro-Banthine orally was an "inhibitor of spontaneous and histamine-stimulated gastric secretion" which "resulted in marked and prolonged inhibition of the motility of the stomach, jejunum, and colon. . . ."

Therapy with Pro-Banthine is remarkably free from reactions associated with parasympathetic inhibition. Dryness of the mouth and blurred vision are much less common with Pro-Banthine than with other potent anticholinergic agents.

In Roback and Beal's[2] series "Side effects were almost entirely absent in single doses of 30 or 40 mg. . . ."

Pro-Banthine (β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is available in three dosage forms: sugar-coated tablets of 15 mg.; sugar-coated tablets of 15 mg. of Pro-Banthine with 15 mg. of phenobarbital, for use when anxiety and tension are complicating factors; ampuls of 30 mg., for more rapid effects and in instances when oral medication is impractical or impossible.

For the average patient one tablet of Pro-Banthine (15 mg.) with each meal and two tablets (30 mg.) at bedtime will be adequate. G. D. Searle & Co., Research in the Service of Medicine.

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1. Schwartz I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: Gastroenterology *25*:416 (Nov.) 1953.

2. Roback, R. A., and Beal, J. M.: Gastroenterology *25*:24 (Sept.) 1953.

SEARLE

Women's Auxiliary

Mrs. Garrison

To The

OKLAHOMA STATE MEDICAL ASSOCIATION

Mrs. Cheatwood

Mrs. Mohler

THEME: Leadership in Community Health

SUNDAY, MAY 8, 1955

1:00 p.m. to 5:00 p.m.—REGISTRATION—Mezzanine Floor, Mayo Hotel.

3:00 p.m. to 5:00 p.m.—TEA—Honoring Mrs. George Garrison, Treasurer of the Woman's Auxiliary to the American Medical Association and Mrs. Louis K. Hundley, President of Woman's Auxiliary to the Southern Medical Association. Home of Mrs. Frank Stuart, 2135 E. 48th Street. Courtesy of the Auxiliary to the Tulsa County Medical Society.

7:00 p.m.—EXECUTIVE BOARD MEETING—Buffet Dinner. Home of Mrs. Eric M. White, 3765 S. Xanthus, Mrs. W. R. Cheatwood, Presiding.

MONDAY, MAY 9, 1955

8:30 a.m.—PAST PRESIDENT'S BREAKFAST—English Room, Mayo Hotel, Mrs. Earl McBride, Hostess.

9:00 a.m. to 4:00 p.m.—REGISTRATION—Mezzanine Floor, Mayo Hotel.

INFORMATION—Mezzanine Floor, Mayo Hotel.

HOSPITALITY ROOM—Mezzanine Floor, Mayo Hotel. Hostess Counties: Payne-Pawnee, Lincoln-Pottawatomie, Seminole-Hughes, Carter-Love-Marshall and Atoka-Bryan-Coal.

10:00 a.m.—GENERAL MEETING—Mrs. W. R. Cheatwood, presiding. South end of Mezzanine, Mayo Hotel. All members and visiting physicians wives welcome.

CALL TO ORDER—Mrs. W. R. Cheatwood, President of the Woman's Auxiliary to the Oklahoma State Medical Association.

INVOCATION—Mrs. Frank Flack, Tulsa, Okla.

PLEDGE OF LOYALTY—Mrs. J. F. York, Madill, Okla.

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation, and ever sustain its high ideals."

WELCOME—Mrs. George H. Miller, president elect, of the Auxiliary to the Tulsa County Medical Society.

GREETINGS—Bruce Hinson, M.D., President of Oklahoma Medical Association.

ROLL CALL OF DELEGATES—Mrs. John Cunningham, Oklahoma City, Secretary-Treasurer of the Woman's Auxiliary to the Oklahoma Medical Association.

READING AND ADOPTION OF MINUTES—Mrs. John Cunningham.

TREASURER'S REPORT

PRESENTATION OF PAGES

INTRODUCTION—Guests, President Elect and Convention Chairman.

GUEST SPEAKER—Mrs. George Garrison, Oklahoma City, Treasurer of the Woman's Auxiliary to the American Medical Association.

REPORT OF NOMINATING COMMITTEE—Mrs. E. C. Mohler, President Elect Woman's Auxiliary to the Oklahoma Medical Association.

MEMORIAL SERVICE—Mrs. C. H. Haralson, Tulsa, Okla.

ANNOUNCEMENTS—Mrs. Eric White, Convention Chairman

1:00 p.m. LUNCHEON—Style Show by Nan Pendleton Shop, Crystal Ballroom, Mayo Hotel. Mrs. Charles G. Stuard, President to the Auxiliary of the Tulsa County Medical Association, presiding. INVOCATION—Mrs. Millard L. Henry, McAlester, Okla.

TUESDAY, MAY 10, 1955

9:00 a.m. to 12:00 p.m.—REGISTRATION—Mezzanine Floor, Mayo Hotel.

INFORMATION—Mezzanine Floor, Mayo Hotel.

HOSPITALITY ROOM—Mezzanine Floor, Mayo Hotel.

10:00 a.m.—GENERAL MEETING—Mrs. W. R. Cheatwood, Presiding. Ivory Room, Mezzanine Floor, Mayo Hotel.

CALL TO ORDER—Mrs. W. R. Cheatwood

INVOCATION—Mrs. John Powers Wolff

PLEDGE OF LOYALTY—Mrs. C. M. Bassett, Cushing, Okla.

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation, and ever sustain its high ideals."

REPORT OF CREDENTIALS—Mrs. Emry G. Hyatt, Tulsa, Okla.

ROLL CALL OF VOTING DELEGATES—Mrs. John Cunningham.

PRESENTATION OF REPORTS OF ALL STATE OFFICERS—Mrs. W. R. Cheatwood.

GUEST SPEAKER—R. Q. Goodwin, M.D., President of Oklahoma State Medical Association.

GUEST SPEAKER—Mrs. Louis K. Hundley, President' Woman's Auxiliary to the Southern Medical Association.

UNFINISHED BUSINESS

NEW BUSINESS

REPORT OF BUDGET AND FINANCE COMMITTEE—Mrs. W. K. Ishmael, Oklahoma City

ELECTION OF OFFICERS AND DELEGATES

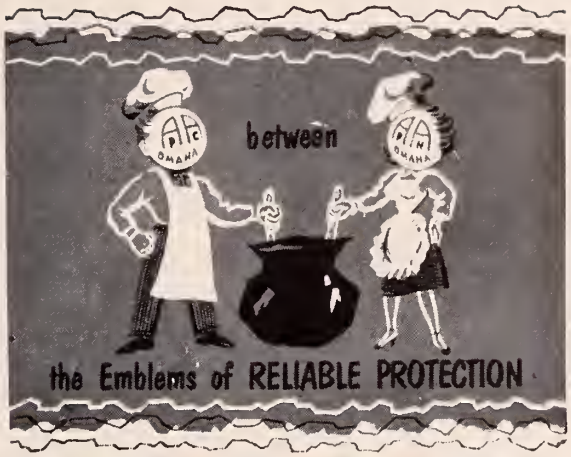
INSTALLATION OF OFFICERS—Mrs. Millard L. Henry, McAlester, Okla., Past President of Woman's Auxiliary to the Oklahoma State Medical Association.

1:00 p.m.—LUNCHEON—Parlors South end of Meznine, Mayo Hotel

POST CONVENTION SCHOOL OF INSTRUCTION AND BOARD MEETING — Mrs. E. C. Mohler, President, presiding.

6:00 p.m. to 1:00 a.m.—ANNUAL PRESIDENTS INAUGURAL BALL—Social Hour, Dinner and Dance. Crystal Ball Room, Mayo Hotel. Russ Morgan's Orchestra.

Something NEW is Cooking



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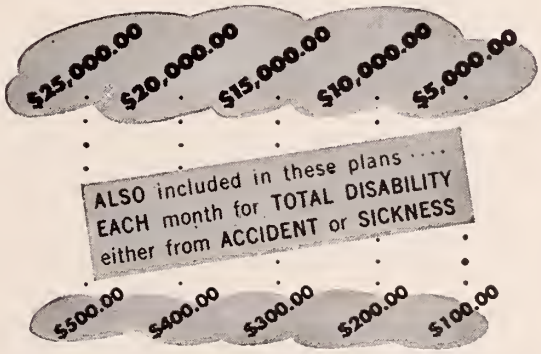
think! HOW THESE AMOUNTS WOULD HELP IN PAYING ESTATE TAXES IN CASE YOU ARE ACCIDENTALLY KILLED...



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$4,000,000 Assets
$20,000,000 Claims Paid
52 Years Old

Physicians Casualty & Health Ass'ns.
Omaha 2, Nebraska

Commercial Exhibits

A. S. ALOE & COMPANY
St. Louis, Missouri **Booth 35**

The A. S. Aloe representatives will be pleased to show you a cross section of the large line of surgical supplies and equipment that Aloe carries. Featured will be Steeline treatment room furniture and the Aloesonic ultrasound generator. Representatives: W. R. Jones, Charles E. Keith.

AMES COMPANY
Elkhart, Indiana **Booth 20**

Clinitest, for urine-sugar analysis, is standardized. This assumes uniformly reliable results whenever and wherever a test is performed—office, ward, clinic or patient's home. Standardization not only curtails error but saves personnel's time by elimination of preparing and mixing reagents. Ictotest, a new specific and sensitive Ames diagnostic tablet test for detection of urine bilirubin as an aid to the diagnosis and management of jaundice and hepatitis, will be on display for discussion and demonstration. Representatives: R. W. Dafforn, W. N. Sallee, and Edwin J. Rohan.

AUDIO-DIGEST FOUNDATION
Glendale, California **Booth 36**

Audio-Digest Foundation, a non-profit subsidiary of the California Medical Association, gives a busy physician an effortless tour through the best of current medical literature each week. This medical "newscast," compiled and reviewed by a professional Board of Editors, may be heard in the physician's automobile, home or office. The Foundation, whose profits are distributed among the nation's medical schools, also offers tape-recorded medical lectures by nationally recognized authorities. Representative: Harold Heller.

AYERST LABORATORIES
New York, New York **Booth 25**

Oklahoma physicians will be cordially welcomed by Ayerst representatives for literature and samples of Ayerst's leading pharmaceutical products. Representatives: Ray C. Hageman, Jr., E. C. Trueblood, and C. R. Dinehart.

BAKER COMPANY—AUDOGRAPH DISTRIBUTORS
Lubbock, Texas **Booth 33**

You are invited to see and use the new PhonAudograph III, and the new Audograph Model V. PhonAudograph III gives you "Pushbutton Dictation"—it does more, costs less, and you talk into a telephone instrument. There is no machine in your office. Nothing to load or thread, only a telephone with pushbuttons. Dictating is quicker and easier with Audograph Electronic Soundwriting Equipment. Representatives: C. E. Barrett, Harrold Hill, Paul Baker.

BLUE CROSS—BLUE SHIELD PLANS OF OKLAHOMA
Tulsa, Oklahoma **Booth 57**

A visual illustration of the functions and activities of the Blue Cross and Blue Shield Plans of Oklahoma with particular emphasis on physician relationships. Relax in our comfortable lounge. Representatives: Velma Neely, Jim Dennis, and Ralph Rhoades.

CARNATION COMPANY
Los Angeles, California **Booth 32**

Carnation Company is pleased to present the first Instant Nonfat Dry Milk. You are cordially invited to visit with us and sample this miracle product . . . the greatest advance in the dairy industry since homogenization. You'll like its fresh milk flavor. It dissolves instantly, even in ice water. An excellent, economical source of protein; useful in diets for weight reduction, high protein, undernutrition, pregnancy and geriatrics. Representatives: Richard G. Robards, R. C. Henley, William J. Miller, Rex O. Stubbs, William R. Wooton.

CIBA PHARMACEUTICAL PRODUCTS, INC.
Summit, New Jersey **Booth 28**

The Ciba exhibit will feature Serpasil, a pure crystalline alkaloid of Rauwolfia possessing the essential antihypertensive actions of the whole root. Serpasil offers mild, gradual, sustained lowering of blood pressure with a slowing of the heart rate; a tranquilizing effect beneficial in most cases of hypertension and unvarying potency. Representatives to be announced later.

COCA COLA COMPANY
Tulsa, Oklahoma **Booths 39-40**

For your refreshment delicious complimentary bottles of ice cold Coca Cola. Representatives to be announced later.

DICTAPHONE CORPORATION
Tulsa, Oklahoma **Booth 43**

Demonstrating the latest and most modern of dictating equipment, attractively priced and designed to meet your office needs. Representative: Don Hagen.

DOHO CHEMICAL COMPANY
New York, N.Y. **Booth 41**

The Doho Chemical Company will be pleased to exhibit Auralgan, the ear medication for relief of pain in Otitis Media and removal of Cerumen, New Otosmosan, the effective non-toxic ear medication which is Fungicidal and Bactericidal (gram negative-gram positive) in the suppurative and aural dermotomycotic ears, and Rhinalgan, the nasal decongestant which is free from systemic or circulatory effect and equally safe to use on infants as well as the aged. Mallon Chemical Company, subsidiary of Doho, is also featuring Rectalgan, the liquid topical anesthesia, also for relief of pain and discomfiture in hemorrhoids, pruritus, and perineal suturing. Representative: Louis Cassell.

EATON LABORATORIES
Norwich, New York **Booth 12**

For prompt results in urinary tract infections, Furadantin (R) is now available in the form of tablets and as Furadantin Oral Suspension. Within 30 minutes after ingestion of this drug, the urine becomes strongly antibacterial. Dosage forms of the topical antibacterial Furacin (R) of special interest include Furacin Soluble Powder for wounds and burns, Furacin Nasal for rhinitis and sinusitis, Furacin Ophthalmic Liquid and Ointment for treatment and prevention of external ocular infections, Furacin Vaginal Suppositories for cervicitis, and Furacin Urethal Suppositories for urethritis.

EAGLE UNIFORM MANUFACTURING COMPANY
Oklahoma City, Oklahoma **Booth 34**

Our salesmen and models will exhibit the latest nursing uniforms, samples of all doctors apparel, smocks, coats, jackets, and other garments. Representatives: R. F. J. Williams, Jr., Cecil I. Gulihur, and George Clark.

FLINT-EATON & COMPANY
Decatur, Illinois **Booth 14**

Flint, Eaton & Company presents Ferrolip, a new chelate complex of iron. Chelated iron, as in Ferrolip, is resistant to all usual chemical forces serving to precipitate iron and to produce iron intolerance; yet, the chelated iron in Ferrolip is completely soluble and readily available for uptake along the entire gastrointestinal tract. Visit our booth to hear of chelation as it applies to iron therapy. Representatives: Frank Bland, Robert Honey, C. R. Kemp.

GENERAL ELECTRIC COMPANY
Oklahoma City, Oklahoma **Booth 31**

Displaying General Electric's complete line of finest x-ray equipment, supplies and accessories. Representatives: C. A. Bohan, E. R. Rector, J. O. Jones, W. E. Estes, Guy Shirk, and V. R. Troop.

GREB X-RAY COMPANY
Oklahoma City, Oklahoma **Booth 26**

Distributors of Picker-Waite X-Ray Equipment, diagnostic and therapy accessories, Liebel-Flarsheim short wave equipment, Hanovia Ultra-Violet Lamps, and Beck-Lee EKGS. Representatives to be announced.

HOLLAND-RANTOS COMPANY, INC.
New York, N.Y. **Booth 50**

Physicians interested in Medical Contraception are invited to discuss with H-R representatives latest information on laboratory and clinical data concerning efficacy of Koromex products. Also on display will be the trichomonicidal, fungicidal and bactericidal Nylmerate Jelly and Nylmerate Solution Concentrate for vaginal use as indicated. Representatives: James M. Zipen and Charles S. Donahue.

R. P. KINCHELOE COMPANY
Dallas, Texas **Booth 51**

The R. P. Kincheloe Company, distributors of Keleket X-Ray apparatus, Cambridge Electrocardiographs, and Liebel-Flarsheim diathermy electro-surgical units, with offices in Oklahoma City and Tulsa, will be looking forward to a visit from their many friends and customers at this meeting. Representative: Freeman W. Kirbey.

ELI LILLY & COMPANY
Indianapolis, Indiana **Booth 52**

You are cordially invited to visit the Lilly exhibit. It will contain information on re-

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for "This Wormy World"

PINWORMS

ROUNDWORMS

*SYRUP OF 'ANTEPAR' Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

*TABLETS OF 'ANTEPAR' Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
Tuckahoe, New York

cent therapeutic developments. Lilly sales people will be in attendance and will welcome your questions about Lilly products. Representative: Gene D. Thomas.

J. B LIPPINCOTT COMPANY
Philadelphia, Pennsylvania **Booth 16**

J. B. Lippincott Company presents for your approval a display of professional books and journals geared to the latest and most important trends in current medicine and surgery. These publications, written and edited by men active in clinical fields and teaching, are a continuation of more than 100 years of traditionally significant publishing. Representative: J. L. Rosecrants.

J. A. MAJORS COMANY
New Orleans, Louisiana **Booth 18**

The W. B. Saunders Company, Medical Publishers of Philadelphia, through their Southern agents, J. A. Majors Company, will feature many new books including: Shackelford, "Surgery of Alimentary Tract," three volumes; Ochsner & DeBakey, New Seventh Edition of Christopher's "Minor Surgery"; Conn, "Current Therapy," 1955; Alexander, "Drug Therapy"; Allen, Barker and Hines, "Peripheral Vascular Diseases"; and many others. Representatives: Jack McClendon, Tom Cotter.

MEAD JOHNSON COMPANY
Evansville, Indiana **Booth 19**

Mead Johnson Company invites you to see new displays of Liquid Lactum and Powdered Lactum, the infant formula products with balanced caloric distribution. Also featured in the Mead booth will be Liquid Sobee, a hypoallergenic (milk-free) soya formula; Natalins, the smaller prenatal vitamin-mineral capsules; Natalins-T, for the treatment of anemias of pregnancy plus protective nutritional support; and Sustagen, the complete food for tube or oral feeding. Representatives: G. Richard Brown, J. D. Parks.

MEDCO PRODUCTS COMPANY
Tulsa, Oklahoma **Booth 17**

The Medcolator Stimulator, for the stimulation of innervated muscle or muscle groups ancillary to treatment by massage is a low volt generator that will generate plenty of interest. Electrical muscle stimulation is a valuable form of rehabilitation therapy. Visit our booth for a personal demonstration. Representative: Mark E. DeGroff.

MERKEL X-RAY COMPANY
MID-CONTINENT SURGICAL SUPPLY COMPANY
Tulsa, Oklahoma **Booth 44**

Merkel X-Ray Company and Mid-Continent Surgical Supply Company are showing the new Hamilton Steeltone Treatment Furniture, the Birtcher Ultrasonic, the new Bausch & Lomb Spectronic 20, and selected items believed to be of interest. They are looking forward to greeting their many friends at Booth 44. Representative: Fred L. Merkel.

MELTON-MYERS SURGICAL SUPPLY COMPANY
Tulsa, Oklahoma **Booth 6**

THE MELTON CO., Inc.
Oklahoma City, Oklahoma **Booth 6**

Visit our booth and examine the latest in modern surgical instruments and equipment, manufactured by America's leading manufacturers of surgical supplies. Representatives: Murray Myers, Oscar Stewart.

MIDWEST SURGICAL SUPPLY COMPANY
Oklahoma City, Oklahoma **Booth 48**

We feel that in our endeavor to exhibit a few of our items in a convention booth that we are overlooking many important useful articles that would ordinarily be presented under circumstances allowing a large and more durable scope. We invite you to discuss your needs with us. Make yourselves at home at our booth, leave your hats, coats, kids, hangovers and old golf balls for future recovery. Representatives: Fly Hill, Harvey Vorse, Kermit Howell, Don Chastain, Clint Jennings.

NATIONAL DRUG COMPANY
Philadelphia, Pennsylvania **Booth 37**

You are cordially invited to visit the booth of the National Drug Company. The featured product will be Parenzyme Intramuscular Trypsin. Parenzyme Intramuscular Trypsin is a new, effective weapon against acute local inflammation. It restores local circulation with dramatic benefits in Phlebitis (thrombophlebitis and phlebothrombosis); Ocular Inflammation (iritis, iridocyclitis and chorioretinitis); Traumatic Wounds, and Varicose and Diabetic Leg Ulcers. Parenzyme Intramuscular Trypsin is based on an entirely new concept of biological continuity in terms of clinical enzymology. In very small doses, it initiates physio-

Results With

'ANTEPAR'®*

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In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against **ROUNDWORMS**

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

***SYRUP OF 'ANTEPAR'** Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

***TABLETS OF 'ANTEPAR'** Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York

on all 4 counts

ACH

- wide spectrum of effectiveness
- rapid diffusion
- prompt control of infection
- minimum side effects

he decision often favors

ROMYCIN*

HYDROCHLORIDE
TETRACYCLINE HCl *LEDERLE*

Compared with certain other antibiotics, ACHROMYCIN offers a broader spectrum of effectiveness, more rapid diffusion for quicker control of infection, and the distinct advantage of being well tolerated by the great majority of patients, young and old alike.

Within one year of the day it was offered to the medical profession, ACHROMYCIN had proved effective against a wide variety of infections caused by Gram-negative and Gram-positive bacteria, rickettsiae, and certain viruses and protozoa.

With each passing week, acceptance of ACHROMYCIN is still growing. ACHROMYCIN, in its many forms, has won recognition as a most effective therapeutic agent.

Lederle

LEDERLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* Pearl River, New York

*REG. U. S. PAT. OFF.

logic mechanisms—and dramatically restores circulation, expedites repair of tissue, and prevents tissue necrosis. Representative: C. M. Kelly.

OKLAHOMA PHYSICIANS SUPPLY COMPANY
Oklahoma City, Oklahoma **Booth 1**

Visit our booth for a display for the finest in modern equipment and supplies for the Oklahoma doctor. Representatives: Ray W. Broadfoot, L. A. Wamsley, and Fred E. Schrandt.

ORTHO PHARMACEUTICAL CORPORATION
Raritan, New Jersey **Booth 56**

Ortho cordially invites you to visit their exhibit. The Ortho display will feature Preceptin R vaginal gel, their product for conception control, designed for use without a vaginal diaphragm. Preceptin vaginal gel has achieved an outstanding record of clinical effectivness and has been widely acclaimed by the medical profession. Your inquiries are invited. Representatives: Jesse C. Mayfield, Noble S. Birkett.

PARKE DAVIS & COMPANY
Detroit, Michigan **Booth 27**

Medical service members of our staff will be in attendance at our exhibit for consultation and discussion of various products of particular interest to members of the Association. Important specialties, such as Penicillin S-R, Benadryl, Ambodryl, Dilantin Suspension, Vitamins, Oxycel, Milontin, Amphedase, Thrombin Topical, etc., will be featured. Representatives: S. N. Downs, G. W. Walker.

PET MILK COMPANY
St. Louis, Missouri **Booth 53**

We will be pleased to have you stop and discuss the variety of time-saving material available to busy physicians. Our representatives will be on hand to discuss the merits of "Pet" Evaporated Milk for infant feeding, and Instant "Pet" Nonfat Dry Milk for special diets. A miniature "Pet" Evaporated Milk can will be given to all visitors. Representatives: George Bostian, W. L. Maxton.

PFIZER LABORATORIES
Brooklyn, New York **Booth 13**

You are invited to visit the Pfizer booth. Terramycin Intramuscular, Cortril, Bonamine, and Tyzine will be the highlights this year of a star-studded cast including the complete line of tested and proved Terramycin dosage forms, Tetracyn, the latest broad spectrum antibiotic and the Steraject line of injectable penicillin and combiotic preparations. Representatives: Mel Shaffer, James Smith, Jack Salyers.

R. J. REYNOLDS TOBACCO COMPANY
Winston-Salem, North Carolina **Booth 21**

Welcome to the R. J. Reynolds Tobacco Company exhibit. You are cordially invited to receive a cigarette case (monogrammed with your initials) containing your choice of Camel, Cavalier King size, or Winston, the distinctive new king size, filter cigarette. Representatives: J. W. McDowell, J. W. White.

A. H. ROBINS COMPANY, INC.
Richmond, Virginia **Booth 22**

Physicians attending the meeting of the Oklahoma State Medical Association are extended a cordial invitation to visit the exhibit of the products of the A. H. Robins Company. Experienced medical representatives will be in attendance to welcome you and answer inquiries relative to any of Robins' prescription specialties. Representatives: Charles A. Faith, Edwin G. Proctor, C. D. Wheeler, Jr.

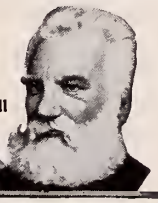
J. B. ROERIG & COMPANY
Chicago, Illinois **Booth 24**

Physicians and their friends are cordially invited to visit the Roerig Booth where there will be highlighted the Company's preparations, some of which Roerig has pioneered and established for them a wide acceptance in the medical profession. Roetinic, the new one a day capsule hematinic for all anemias amenable to oral therapy. Bonadocin, for the prevention of nausea and vomiting of pregnancy and post operatively. ASF, Roerig's new anti-stress formula and Vi-Thyro for the activation and vitalization of the Thyroid gland. Also available will be Viterra, Viterra Therapeutic, Amplus, Obron, Obron Hematinic, and Heptuna Plus. Samples and literature will be available including adequate amounts for clinical trial. Representatives: James H. Putman, Ray R. Crawford, Grey Collier.

pedigree

Only a flawless pedigree — a long and illustrious ancestry of purebreds — can produce a champion show dog.

Only **audivox** in the hearing-aid field can trace an ancestry that includes both Western Electric and Bell Telephone Laboratories. **audivox** lineage springs from the pioneer experiments of Dr. Alexander Graham Bell, furthered by the development of the hearing aid at Bell Telephone Laboratories, brought to fruition by Western Electric and **audivox** engineers.



Alexander Graham Bell

audivox

Successor to *Western Electric* Hearing Aid Division
123 Worcester St., Boston, Mass.

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Model 72
by Audivox

new:

audivox presents a versatile new tool in the psychological and somatic management of hearing loss — the Model 72 "New World." Because it departs completely from conventional hearing-aid appearance, this tiny "prosthetic ear" may be worn as a barrette, tie clip, or clasp without concealment. Resultant benefits include new poise and new aural acuity for the wearer through free-field reception without clothing rustle.

MANY DOCTORS rely on career Audivox dealers for conscientious, prompt attention to their patients' hearing needs. There is an Audivox dealer — chosen for his interest, ability, and integrity — in your vicinity. He is listed in the Hearing Aid section of your classified telephone directory, under Audivox or Western Electric.

the pedigreed hearing aid.

SANDOZ PHARMACEUTICALS
Hanover, New Jersey **Booth 47**

Visit our booth for literature and samples of Sandoz' modern pharmaceutical products. Representatives to be announced.

SCHERING CORPORATION
Bloomfield, New Jersey **Booth 54**

Members of the Oklahoma State Medical Association and their guests are cordially invited to visit the Schering exhibit where new therapeutic developments will be featured. Schering representatives will be present to welcome you and discuss with you the products of our manufacture. Representatives: Ralph N. Couch, Harold L. Cooper, Ralph J. Hagood.

G. D. SEARLE & COMPANY
Chicago, Illinois **Booth 55**

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research. Featured will be Mictine, the new safe, non-mercurial oral diuretic; Vallestril, the new synthetic estrogen with extremely low incidence of side reactions; Banthine and Pro-Banthine, the standards in anti-cholinergic therapy; and Dramamine, for the prevention and treatment of motion sickness and other nauseas. Representatives: Frank R. Cotten, Thomas R. Sellers.

E. R. SQUIBB & SONS
New York, N.Y. **Booth 49**

The Squibb exhibit will feature Raudixin, the safe hypotensive agent. Rauwolfia contains the whole root of Rauwolfia serpentina accurately standardized for uniform hypotensive and sedative effect. Representatives: M. A. Fortner, W. A. Cates, A. M. Sayles.

ST. PAUL-MERCURY INDEMNITY COMPANY
St. Paul. Minnesota **Booth 38**

St. Paul-Mercury is the official professional liability carrier of the Oklahoma State Medical Association. The booth will be staffed by Company representatives who will furnish assistance on all matters pertaining to the Oklahoma insurance plan. Representatives: F. O. Cress, G. L. Fransen, G. L. Estes, J. M. Campbell.

STUART COMPANY
Pasadena, California **Booth 45**

Visit our booth where our representatives will acquaint you with our modern pharmaceutical preparations. Clinical samples and literature are available. Representatives: Dave F. Babcock, Bob G. Burns.

UPJOHN COMPANY
Kalamazoo, Michigan **Booth 32**

Members of the Oklahoma State Medical Association are invited to visit the Upjohn booth where members of the Upjohn Company professional detail staff are prepared to discuss subjects of mutual interest. Representatives: Preston Walker, Dorwin Lamkin.

U.S. VITAMIN CORPORATION
New York, N.Y. **Booth 15**

An exhibit featuring original, complete lipotrophic therapy. Methischol, the combination of five proven lipotropic agents: B12, choline, methionine, inositol and liver extract, will be a featured product. Representatives to be announced.

WALLACE & TIERMAN, INC.
Belleville, New Jersey **Booth 46**

All physicians are cordially invited to visit the exhibit of Maltbie Laboratories, subsidiary of Wallace & Tiernan, Inc., with featured items to include Desenex and Salundek, the well-known fungicides; Malcotran, for peptic ulcer therapy; Cholan-HMB, for biliary dysfunction; and Calpurate, for congestive heart failure. Representatives: J. P. Lorenzo, A. L. Stuvland.

WARREN-TEED PRODUCTS COMPANY
Columbus, Ohio **Booth 30**

The Warren-Teed Products Company cordially invites you to visit their exhibit where many new products of interest to the medical profession will be displayed. Courteous representatives will be in attendance at all times to help registrants in any way possible. Representatives: R. E. Loftus, J. M. Hamilton.

WINTHROP-STEARNS, INC.
New York, N.Y. **Booth 29**

Alevaire, nontoxic inhalant, is useful for preventing postoperative pulmonary complications as well as for the treatment of bronchitis, bronchiectasis and neonatal asphyxia due to atelectasis or aspiration of amniotic fluid. Representatives: H. L. Wood, O. A. Wasem.

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nonhormonal anti-arthritic

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relieves pain • improves function • resolves inflammation

The standing of BUTAZOLIDIN among today's anti-arthritics is attested by more than 250 published reports. From this combined experience it is evident that BUTAZOLIDIN has achieved recognition as a potent agent capable of producing clinical results that compare favorably with those of the hormones.

Indications: Gouty Arthritis Rheumatoid Arthritis Psoriatic Arthritis
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BUTAZOLIDIN® (brand of phenylbutazone) red coated tablets of 100 mg.

*Bunim, J. J.: Research Activities in Rheumatic Diseases. Pub. Health Rep. 69:437, 1954.

GEIGY PHARMACEUTICALS
Division of Geigy Chemical Corporation, 220 Church Street, New York 13, N.Y.
48555

Oklahoma Tuberculosis Association

ANNUAL MEETING PROGRAM

April 21-22, 1955—Hotel Tulsa, Tulsa, Okla.

Thursday, April 21, 1955

10:00 a.m. - 11:15 a.m. —"Telling the Public about our Tuberculosis Problems" —A symposium. Chairman, J. Burr Gibbons, Tulsa.

"Using Newspapers" —Richard Lloyd Jones, Jr.

"Using Television" —Miss Fran Lewis, WKY-TV, Okla. City

"Using Radio" —Carl Jantzen, KTUL, Tulsa

11:15 a.m. - 11:30 a.m. —Intermission

11:30 a.m. - 12:00 Noon —"The Christmas Seal Sale—An Aid to Health Education"—A Panel. Chairman, Mrs. Edna Woodson, Alva, Moderator, King Bostock, Tulsa

Miss Loretta Abell, Okla-City

Floyd S. Fowler, Tulsa

Mrs. Gladys F. Cobbs, El Reno

12:15 p.m. - 1:45 p.m. —Luncheon — Joint meeting of all Sections

Invocation

Program —Welcome by Mayor of Tulsa —L. C. Clark

Address —"Transition in our Practices", John H. Skavlem, M. D., President, National Tuberculosis Association, Cincinnati

2:00 p.m. - 3:15 p.m. —"Problems in Home Care of Tuberculosis", Panel Discussion (joint meeting with Nursing Section), Moderator—Dr. L. T. Rogers, Norman

Nurses —Miss Jean South, R.N., New York; Miss Jo Barnard, R. N., Tulsa

Physician —R. M. Shepard, Jr. M.D., Tulsa

Health Department —T. Paul Haney, M.D., Tulsa

Welfare Department —Charles B. Taylor, M.D., Oklahoma City, S. H. Singleton, Oklahoma City

Medical Social Worker —Elisabeth Silcott, Shawnee

3:15 p.m. - 3:30 p.m. —Intermission

3:30 p.m. - 4:45 p.m. —"The Tuberculosis Association Board's Responsibility for the Program"

Keynote: Berkley Leeds, Associate, Program Development Division, National Tuberculosis Ass'n., New York

Role Playing —Demonstration of effective and ineffective board meetings.

6:00 p.m. - 7:00 p.m. —Buffet Supper—All Sections Michalis Cafeteria Club Room, 507 South Boulder

Hostesses: —Oklahoma Conference of Tuberculosis Workers

Evening: —Film Viewings: TB Educational Film, OCTW representatives Clinic on Health Educational Materials, OC TW representative

Friday, April 22, 1955

9:00 a.m. - 10:00 a.m. —"Round-up of Association Reports", Chairman Jerome L. Croston, Sapulpa

Local TB Association—Jack Patterson, Frederick; Miss Lois Ann Miller, Enid; Miss Mary Jeffers, Antlers

Oklahoma TB Association—Miss Emma Lou Henderson, Oklahoma City

National TB Association—Berkley Leeds, New York

10:00 a.m. - 10:15 a.m. —Intermission

10:15 a.m. - 11:30 a.m. —"Legislation — The Challenge of Tuberculosis Associations", Chairman, Col. Charles A. Holden, Tulsa

"The Proposed Institutional Control Bill"

Pro—Shockley T. Shoemake, Representative, Osage county

Con—J. R. Hall, Representative, Ottawa county

"The Effects of other Proposed Legislation on Tuberculosis Control", George P. Pitcher, Representative, Craig County

12:00 Noon - 1:30 p.m. —Luncheon—Presiding, C. D. Lewis, President, Oklahoma TB Assn., Okmulgee

Invocation: —

Address: —O. D. Durant, Oklahoma A & M College, Stillwater

1:30 p.m. —Board of Director's Meeting, Oklahoma TB Association Adjournment

Oklahoma Trudeau Society

Third Annual Meeting

American Room — Hotel Tulsa

April 21, 1955

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SELSUN®

. . . brings quick, sure relief. Just two or three SELSUN applications relieve itching, burning scalps. Four or five more completely clear scaling. Then each SELSUN application keeps the scalp free of scales *for one to four weeks.* And SELSUN completely controls 81-87% of all seborrheic dermatitis cases, 92-95% of dandruff cases.

. . . with no daily care or ointments. Your patients will find SELSUN remarkably easy to use. It is applied and rinsed out while washing the hair. Takes only about five minutes — no ointments or overnight applications. Leaves hair and scalp clean. In 4-fluidounce bottles, prescription only.

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Scientific Exhibits

LESIONS OF THE ESOPHAGUS.

E. H. Kalmon, M.D., Oklahoma City, and J. M. Carey, M.D., Oklahoma City. A study of twenty-five cases demonstrating roentgenographically multiple esophageal lesions. Each case will have a brief description.

PLASTIC SURGERY.

George H. Kimball, M.D., Oklahoma City. A photographic display of unusual cases of plastic repair.

RADIOACTIVE IODINE IN THE TREATMENT OF THYROID DISEASES.

St. John's Radio-Isotope Committee, St. John's Hospital, Tulsa. A display and study of the equipment and materials used in the radio-active iodine therapy in tracer doses and in treatment of thyroid diseases. Charts will show percentages of normal and abnormal uptakes, case summaries, and procedures for I-131 uptake. Also displayed will be geiger counters, scintillation counters, and electroscopes.

PHARMACY.

American College of Apothecaries, Oklahoma Chapter. A study of the progress of modern pharmacy.

THE PATHOLOGY OF BRUCELLOTIC OSTEOMYELITIS.

Leo Lowbeer, M.D., Department of Pathology, Hillcrest Medical Center, Tulsa. An exhibit based on autopsy material from three cases of Brucella melitensis spondylitis, one case of Brucella abortus spondylitis, one case of Brucella suis, three cases of spontaneous Brucella suis spondylitis of hogs, four cases of Brucella suis osteomyelitis in inoculated guinea pigs. Includes 224 photographs and photomicrographs.

MEDICAL ASPECTS OF CIVIL DEFENSE.

Oklahoma State Civil Defense Oklahoma City. A study of the medical aspects of Civil Defense in the State of Oklahoma.

HEMATOLOGY.

Tulsa County Red Cross Blood Center, Tulsa. Information about the blood recruitment program in Tulsa County. Blood will be taken from donors.

DIFFERENTIAL DIAGNOSIS IN PULMONARY DISEASE.

Oklahoma Tuberculosis Association, Oklahoma City. An exhibit intended to show that a correct diagnosis of tuberculosis can seldom be made from an x-ray alone.

CLASSIFIED ADS

FOR SALE: Physician's office furniture and equipment $1000. Excellent location for a young M.D. in town of 5,000 population. One other M.D. 18 bed open staff hospital, eastern Oklahoma. Retiring. Write Key D, care of the Journal.

FOR SALE: G. E. Maxicon 100 MA X-Ray, used one and one-half years only, diathermy, examining room furniture and instruments, reception room furniture, laboratory equipment, desk, etc. Closing office to specialize. Write Key R, care of the Journal.

FOR RENT: Modern clinic building, Woodward, Okla. Air conditioned, will accommodate four or five men. Excellent opportunity for surgeon and group. New hospital open staff. Occupancy about April 1, 1955. For further inquiry address D. W. Darwin, M.D., 725 Republic Bldg., Denver 2, Colo.

OPPORTUNITIES are offered in Washington State for qualified physicians and psychiatrists. Salaries from $8,304 to $9,912 plus full maintenance at cost in growing mental health and correctional programs. Inquiries answered promptly by State Personnel Board, Box 688, Olympia, Washington.

FOR SALE: One Reese Dermatone. Like New. Complete with case. Original price $350, will sell for $150. Contact Key F, care of the Journal.

STAFF PHYSICIAN: Additional physicians are needed by one of America's most modern aircraft plants. Our rapidly expanding program necessitates additional physicians to assist with physical examinations and industrial injuries. Working conditions in a completely air-conditioned plant are excellent. Forty hour week with many generous employe benefits make these positions most attractive.

For further information may we suggest you call Tulsa 8-3351, extension 696. DOUGLAS AIRCRAFT COMPANY, INC., 2000 North Memorial Drive, Tulsa, Oklahoma.

FOR SALE: Surgical, obstetrical instruments. Plate glass instrument cabinet. Electronic equipment. Contact Mrs. Dan Gray, Guthrie, Oklahoma. Phone 393.

The individualized formula is the foundation of the infant's health and future well being

Karo Syrup...a carbohydrate of choice in "milk modification" for 3 generations

Ideal practice dictates periodic adaptation of the individualized formula to the growing infant rather than the infant to the formula. With Karo, milk and water in the universal prescription, the doctor can readily quantitate the best formula for the infant. A successful infant formula thus lays the foundation for early introduction of semi-solid foods in widening the infant's spectrum of nutrients.

Karo is well tolerated, easily digested, gradually absorbed at spaced intervals and completely utilized. It is a balanced fluid mixture of maltose, dextrins and dextrose readily soluble in fluid whole or evaporated milk. *Precludes* fermentation and irritation. Produces no intestinal or hypoallergenic reactions. Bacteria-free Karo is safe for feeding prematures, newborns, and infants —well and sick.

Light and dark Karo are interchangeable in formulas; both yield 60 calories per tablespoon.

CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N. Y.

Behind each bottle three generations of world literature

OKLAHOMA STATE MEDICAL ASSISTANTS SOCIETY

PROGRAM

Annual Meeting, Hotel Tulsa, May 6-8, 1955

Friday, May 6, 1955

8:30 p.m. Reception Honoring Past Presidents. Dr. and Mrs. N. Stuart White, Hosts

Saturday, May 7, 1955

8:00 a.m. Registration
9:00 a.m. Call to Order—Bonnie Swafford, Tulsa, President
9:05 a.m. Invocation
9:10 a.m. Greetings—Hazel Wade, General Chairman
9:15 a.m. Business Meeting
10:15 a.m. "Some Aspects of Insurance and the Physician"—Jack Spears, Executive Secretary, Tulsa County Medical Society, Tulsa
11:00 a.m. "Getting Along with the People You Work With"—Charles J. Loveless, President, President, Loveless Employment Agency, Tulsa
11:50 a.m. Recess
12:00 Noon Luncheon—Blue Cross-Blue Shield Plan Building, 1215 S. Boulder, Tulsa. Compliments of the Blue Cross-Blue Shield Plans of Oklahoma
2:00 p.m. Roll Call
2:15 p.m. Business Meeting, Election of Officers, and Club Reports
3:00 p.m. "You and Your Allergies"—W. A. Showman, M.D., Tulsa
3:30 p.m. Announcements and adjournment
5:30 p.m. Reception. Compliments of the Medical Service Society of Tulsa
7:00 p.m. Dinner
Welcome—Carrie Hendricks, Tulsa
Introduction of the Speaker—John F. Burton, M.D., Oklahoma City
"The Doctor's Assistant"—Elmer Hess, M.D., President-Elect, American Medical Association, Erie, Pennsylvania
9:00 p.m. Dancing to the Music of Toby Young and His Orchestra

Sunday, May 8, 1955

9:00 a.m. Invocation
9:05 a.m. Breakfast. Compliments of the Medical Credit Bureau, Tulsa
9:30 a.m. "Nurses Notes"—Jean Barlow, E. R. Squibb & Sons, New York, N. Y.
10:00 a.m. "The Robe"—L. J. Starry, M.D., Oklahoma City
10:45 a.m. Call to Order and Presentation of State Project
11:00 a.m. Installation of Officers
11:30 a.m. President's Inaugural Address—Jeanne O'Dell, Nowata
12:00 Noon Luncheon and Program
2:15 p.m. Adjournment

Convention Registration Fee, $6.00 includes Saturday luncheon, dinner, dance, Sunday breakfast, luncheon. Hazel Wade, 1001 Medical Arts Bldg., Tulsa, Okla., Chairman.

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Editorials

The Philosophy of the Care of the Long Term Patient

The Health Resources Advisory Committee of the Office of Defense Mobilization is concerned over the maximum utilization of hospital and personnel facilities for the care of the long term patient. A sub-committee on Hospital Services has studied the problem and has submitted a report.

Stripped of its verbiage, the report recommends that all facilities used in the training of personnel who have anything to do with the hospital care of such patients adopt a philosophy of rehabilitation which would (1) exert maximum effort of skilled people to return the patient to maximum performance as soon as possible and (2) when maximum performance is attained, further care in hospitals by trained personnel be discontinued if it is no longer required. If the patient can work, he is to go back to work. If all he needs is custodial care, he can receive that at home or in an institution designed and staffed for that purpose.

It is obvious that responsibility for properly interpreting the patient's needs rests primarily with the physician in charge. It is, therefore, up to him to see that the most effective and most economic use is made of the skilled personnel available to him for the patient's care. It is up to him, too, to decide when the patient has reached his maximum in terms of objective rehabilitation.

There is no quarrel with this philosophy when the demand exists. There is, however, some misgiving over indoctrination at the level of medical students in this sort of thinking when to him the patient is, and should be, the most important consideration. Let him become a good doctor first. He can learn to think in terms of saving space and personnel later.

Adenoidal-Pharyngeal-Conjunctival Agents

A Newly Recognized Group of Common Viruses of the Respiratory System

The comment of a parent or patient, "penicillin doesn't do him any good," or the "antibiotics never seem to help him" is heard with increasing frequency. An editorial in the *Journal* for January, 1955, commented on the lack of effectiveness of certain of the antibiotics in the non-bacterial group of respiratory infections as reported by Haight, et al.[1]

These authors did not go into detail as to what was meant by "non-bacterial" except to infer that it meant just that.

Huebner,[2] et al, and Parrott,[3] et al, have recently reported on a joint study of this "non-bacterial" group of infections undertaken by the National Microbiologic Institute and the Department of Microbiology at Johns Hopkins. These investigators first reported on 13 isolations of a new agent in surgically removed adenoids by growing of adenoidal epithelium in roller-tube tissue cultures. They have subsequently placed 143 separate strains into six immunologic types. Because these strains have been isolated from the adenoids, pharynx, conjunctiva, feces, they have elected to call these newly discovered viral agents adenoidal-pharyngeal-conjunctival agents.

These agents are type specific on cross-neutralization tests but produce a complement fixing antigen which stimulates the production of an antibody which is group but not type specific. They are epitheliotropic producing unique cytopathogenic changes in human explant cultures, Hela cells, monkey kidney and rabbit trachea. They are not pathogenic for laboratory animals. They are ether resistant, heat labile and filterable. They are resistant to the presently used antibiotics.

In individuals sick with an acute respiratory infection, Type 3 virus has been isolated and during the sickness both the type specific and complement fixing antibody titer have increased significantly. A number of the patients studied became ill after working with other patients who were shown to be suffering from Type 3 infections. Features of the illness in descending order of frequency included pharyngitis, rhinitis, fever, cervical and submandibular lymphadenopathy, conjunctival inflamamation and liver tenderness. In six of the eight patients studied, the white blood count ranged from 7400 to 16400 with counts higher than 11000 in four. As the symptoms progressed, a mild leukopenia developed in most patients.

Antibody titer to all six types was determined in more than 200 persons. Over 50 per cent of children between six months and one year had a significant titer against one or more types and 25 per cent had a significant titer against two or more types.

Since these viral agents are epitheliotropic and cause degenerative changes in epithelial cells, it is not surprising that the pharynx so infected may show some exudate. It has been suggested by the group working with penicillin to prevent rheumatic fever as a sequellae of streptococcal infections, that the appearance of pharyngeal exudate is the principal clinical diagnostic feature of acute streptococcal throat infections. This is undoubtedly true, but a failure in treatment with penicillin does not mean that the Beta hemolytic streptococcus is insensitive to penicillin but that the exudate is caused by some other organism which could be one of the newly discovered viral agents and not necessarily bacterial in origin at all.

This work is new and much is left to be done. Immediately, however, a number of questions that need answers come to the clinician's mind.

Does an infection with a specific type virus confer an immunity and if so, how long lasting? Can the virus live in harmony with tissue as the herpes virus is said to do only to become active and cause sickness when that harmony is disturbed? Does the presence of virus in the stools mean that it has simply been swallowed or is it being elaborated in the intestinal mucosa and, if so, could this be responsible for the symptoms of so-called "G. I. flu"? Can the men in research point a way for the clinician to clinically make a diagnosis of non-bacterial respiratory infection and by so doing help him get away from contributing to the staggering amount of money wasted unnecessarily on antibiotics? Does altering the respiratory flora with antibiotics aid the growth of these viral agents?

The clinician will look forward with great hope to further studies on these little understood infections that he is called on to treat every day.

1. Haight, T. A., Kahn, F. H. and Ziegra, Sumner. Armed Forces M. J. 5:1405 (Oct.) 1954.
2. Huebner, Robert J., et al. New Eng. J. Med. 251:1077 (Dec. 30) 1954.
3. Parrott, Robert H., et al. New Eng. J. Med. (Dec. 30) 1954.

AMERICAN MEDICAL ASSOCIATION

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Scientific Articles

Projected Morality and
REPLACEMENT NEEDS FOR PHYSICIANS
In Oklahoma, 1950-1970

JOHN C. BELCHER, Ph.D.

THE AUTHOR

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Introduction

Fifty years ago, one could find a physician in practically any population center in the United States, and often on farms, as well. The times have changed. Even Oklahoma, a new state, had physicians in 767 towns and villages in 1909, in contrast to only 298 in 1950. During recent decades, physicians, along with most other health practitioners and services, have moved increasingly to the larger towns and metropolitan centers. This has left numerous villages and small towns, and even whole counties, without health personnel of any kind. Frank G. Dickinson estimated in a recent study that only 20.8 per cent of towns in the United States with populations between 100 and 1000 have physicians, in contrast with 88.3 per cent of the towns with from 1000 to 2500 residents, 96.0 per cent of the cities from 2500 to 5000, and all cities with 5000 or more inhabitants.[1]

The concentration of physicians in the larger urban areas has not ended. The smaller the town, the older are its doctors. Therefore, in time, the higher death rates for the aged will decimate the number of physicians in small communities while the number in metropolitan centers will decline relatively little. Table I shows the average age for M.D.s by size of town in Oklahoma for 1950, compiled from the *American Medical Directory* for 1950. The listing in that volume includes the name, residence, birthdate, and other relevant information for every physician, both active and inactive, residing in Oklahoma.[2]

The purpose of this paper is to project the number of M.D.s in Oklahoma from 1950 to 1960, 1965, and 1970. Expected deaths have been subtracted, and it is assumed that no new doctors have or will come into the state, and that there will be no mobility among those here at present. Applying the standard mortality rates for white males from the U.S. Life Tables to the physicians in the State accomplishes this objective.[3] This information is of value in indicating the potential supply of doctors in different areas. Perhaps it would be more desirable to present these data by towns than in aggregates, but such a procedure would identify many individuals. The projections are, therefore, of the number of doctors remaining at various periods by county and by size of groups of towns.

There are many proffered reasons for the decline in the number of physicians in smaller communities. Foremost among these is that this is a changing world—the practice of medicine is vastly different from even a generation ago. The culture has changed in innumerable ways. Doctor John E. McDonald, while president-elect of the Oklahoma State Medical Association two years ago, aptly phrased one aspect of this change related to the changing distribution of physicians. He stated at a regional public hearing on health:

Table 1. Average age of physicians in Oklahoma by size of town, 1950

Size of Town	Average Age
2500—and over	53.9
Tulsa	49.3
Oklahoma City	47.7
2000—2499	54.9
1500—1999	60.3
1000—1499	59.8
750— 999	61.7
500— 749	68.9
250— 499	69.2
Under 250	70.3

"The economics of present day American life, the automobile, good roads, etc., have caused the disappearance of physicians from some small communities, just at it has caused the disappearance of the small bank, the general store, the lawyer, and, in some instances, the church."[4]

The changing distribution of physicians thus runs parallel to similar changes in other groups and institutions and is not unique in our dynamic culture.[5]

Today, continued improvements in communication and transportation obviate most of the past disadvantages of rural practice. Undoubtedly, smaller towns offer some of the greatest opportunities for physicians. Various medical organizations and agencies inform young practitioners of the advantages in rural communities. Recently, most state medical organizations have developed placement services which, in part, endeavor to locate more physicians in smaller communities in an effort to improve the distribution of medical services.[6] The Oklahoma State Medical Association now has an active placement program which is operating in the service of the people of the state, both potential clients and physicians. This paper presents data on the future location of M.D.s, and consequently, relevant to physician placement needs in Oklahoma.

Projections

The age differential in mortality rates naturally suggests a need for the early replacement of older physicians in order to maintain present numbers. To indicate these replacement needs, the age composition of the medical doctors in each county and several sizes of towns were tabulated from the *American Medical Directory* for 1950. The number of expected deaths for each of these categories was computed using 1950-51 United States mortality rates for white males. This tabulation is for three periods: 1950-1960, 1950-1965, and 1950-1970 (Table 2). This table also shows the number of medical doctors in each county in 1954 and, the home residence of students at the University of Oklahoma Medical School in that year. The predicted mortality is, of course, based on averages. Obviously, actual mortality will differ from these predictions.

Of the 2164 physicians in Oklahoma in 1950, by expectancy, 539 will die by 1960; 796 by 1965; and 1018 by 1970. Approximately half of the doctors in the state in 1950 will die within the 20-year period from 1950 to 1970. Thus, to maintain the present number of physicians in the state requires an average of somewhat over 50 new ones each year.

Table 2 shows that there is considerable variation among the counties in the expected deaths among physicians. For the period 1950 to 1970, mortality among physicians by counties will range from about 25 per cent to 100 per cent. There are several other probabilities regarding the projections in deaths and survivals by county:

1. In general, because of age differences, the rate of survival increases directly with the number of doctors per county; i.e., mortality among physicians tends to be greater in those counties already somewhat deficient in medical personnel.

2. Because physicians tend to be older in the eastern than in the western counties of Oklahoma, the eastern section will have the greater replacement needs. For purposes of comparison, the State was divided along the old Indian Territory boundary. In 1950 the eastern counties had a population of 1,165,086 with 997 physicians, compared with a population of 1,068,265 and 1167 doctors in western Oklahoma. The estimate is for 516 deaths of medical doctors in the eastern and only 502 in the western counties between 1950 and 1970. Projected survivals in 1970 and 481 in the old Indian Territory, as compared with 665 in the Oklahoma Territory counties. This greater replacement need in the eastern counties remains the same even if the influence of Tulsa and Oklahoma counties is removed.

3. Variations in age composition by size of town account for the principal difference in the projections of the number of physicians. As stated above, the smaller the town the older are the doctors. Consequently, the smaller towns will have the greater replacement needs, if the present distribution of physicians is maintained. Table 3 shows this differential. In towns having fewer than

250 inhabitants, 85 per cent of the medical doctors will probably die by 1970, compared to 68 per cent in all places with fewer than 2500, and with only 43 per cent in the places having populations above 2500.

Prospects

The first class under the expanded enrollment at the University of Oklahoma Medical school is expected to graduate in June, 1955. At least 50 new doctors will be needed each year between now and 1970 to replace those expiring. It may be assumed that half of each yearly class of approximately 100 will remain in the state, even under adverse economic conditions, since a recent nationwide study showed that 50 per cent of all M.D.s practice in the state providing their medical training. The same study revealed that 56 per cent of the graduates of the University of Oklahoma Medical School have remained in the State.[7] Thus, with the expanded enrollment in the medical school, Oklahoma should easily maintain its present number of physicians. Then with the certain migration of others into Oklahoma. an increase in total numbers should take place.

While this study does not ascertain mobility among the medical doctors in the state nor specifically where new physicians locate, they tend to practice in the same or in communities similar to those in which they were reared.[8] Consequently the home residence of medical students is an apparent factor in the prospects for young doctors locating in different areas of the state. Table 2 shows the home county of students at the University of Oklahoma's School of Medicine for 1954-55. There are 12 counties having no residents in the medical school. Significantly, there are many more students receiving medical training from western than eastern Oklahoma, even though the total eastern population is greater. Only 148 medical students at the University of Oklahoma originated in the Old Indian Territory whereas 240 are from the Oklahoma Territory counties. Almost the same relationship holds when the medical students from Tulsa and Oklahoma are subtracted from the total, the figures being 108 as contrasted with 162.

As expected, the more urban counties generally have the larger number of medical students, because schools in the more rural counties less often provide educational content adequate for pre-medical studies in college. Also, economic disadvantages eliminate large numbers of rural youth from the study of medicine. The result is that 304 (78.4 per cent) of the medical students at the University of Oklahoma come from the 86 urban places, towns with populations of 2500 or more, in the State. Only 84 students list one of the more than 439 towns or villages having less than 2500 as place of residence. Because physicians are reluctant to settle in small towns and rural areas unless reared there,[9] it is logical to expect a further decline in the number of practitioners in smaller communities. Medical schools are cognizant of this problem but have few applicants for medical school from rural areas.

About 19 medical schools now have preceptorship programs, usually designed to give students experience with general practice in more rural communities and to interest them in establishing such a practice.[10] The preceptorship program in Kansas has apparently been quite successful in getting young M.D.s to locate in small towns. The trend in Kansas, as in the rest of the nation, for several decades has been a rapid decline in the number of physicians in the smaller towns. Since the preceptorship program was inaugurated, 220 additional general practitioners have started practicing in Kansas towns having populations of less than 1000.[11] In Oklahoma in 1950, only 178 physicians practiced in towns of this size. One reason for the success of the program in Kansas is that preceptors are selected only from towns of 2500 population or less, and must be "solo" practitioners.[12] Elsewhere, preceptorship programs have been less successful and have been severely criticized.[13] The preceptors in Oklahoma tend to be in larger cities, 64 of the 106 being in cities of 5000 or over. Only 21 are located in towns with populations below 2500.

A comparison of the distribution of medical doctors by county for 1950 with 1954 (see Table 2) indicates a continuation of the trend for physicians to locate in the more urban areas of the State.

Table 2. Number of Physicians in Oklahoma by counties for 1950, 1954, and projections based on 1950 data to 1960, 1965, and 1970.

State	Number of Physicians 1950[1]	Number of Physicians 1954[2]	PROJECTED NUMBER OF PHYSICIANS[3]						Number of Medical[4] Students University of Oklahoma, 1954
			1960		1965		1970		
			Surviving from 1950	Deceased since 1950	Surviving from 1950	Deceased since 1950	Surviving from 1950	Deceased since 1950	
State	2164	2079	1625	539	1368	796	1146	1018	388
Adair	5	5	3	2	2	3	2	3	0
Alfalfa	12	9	10	2	9	3	8	4	2
Atoka	7	3	5	2	4	3	4	3	1
Beaver	4	3	2	2	2	2	1	3	5
Beckham	20	22	16	4	14	6	12	8	8
Blaine	13	12	10	3	8	5	7	6	4
Bryan	23	18	15	8	11	12	8	15	2
Caddo	25	19	17	8	13	12	10	15	5
Canadian	22	21	16	6	14	8	12	10	3
Carter	43	41	29	14	24	19	20	23	3
Cherokee	7	8	4	3	4	3	3	4	6
Choctaw	9	8	7	2	5	4	4	5	1
Cimarron	1	2	1	0	1	0	0	1	1
Cleveland	38	40	31	7	27	11	23	15	10
Coal	3	3	1	2	1	2	0	3	0
Comanche	29	31	22	7	19	10	16	13	13
Cotton	6	6	4	2	4	2	3	3	1
Craig	16	10	12	4	9	7	7	9	3
Creek	26	28	17	9	14	12	11	15	5
Custer	25	24	20	5	17	8	14	11	3
Delaware	8	7	4	4	3	5	2	6	0
Dewey	7	4	4	3	3	4	2	5	3
Ellis	6	7	4	2	4	2	3	3	3
Garfield	55	55	40	15	33	22	27	28	20
Garvin	20	16	15	5	12	8	10	10	1
Grady	35	33	24	11	20	15	16	19	3
Grant	9	5	5	4	3	6	2	7	1
Greer	12	9	9	3	7	5	6	6	4
Harmon	6	5	4	2	3	3	2	4	1
Harper	3	2	2	1	1	2	1	2	3
Haskell	5	4	3	2	3	2	2	3	1
Hughes	17	13	13	4	11	6	9	8	4
Jackson	20	18	14	6	12	8	9	11	5
Jefferson	8	7	6	2	5	3	4	4	0
Johnston	4	3	2	2	1	3	1	3	0
Kay	46	44	36	10	31	15	26	20	7
Kingfisher	14	15	10	4	8	6	7	7	3
Kiowa	15	12	11	4	9	6	8	7	3
Latimer	7	7	4	3	3	4	2	5	0
Le Flore	21	21	12	9	8	13	6	15	4
Lincoln	15	12	10	5	8	7	6	9	0
Logan	22	17	14	8	10	12	8	14	7
Love	4	4	2	2	1	3	1	3	0
McClain	7	6	6	1	5	2	4	3	3
McCurtain	19	14	11	8	7	12	5	14	2
McIntosh	10	5	6	4	5	5	4	6	0
Major	4	4	2	2	2	2	1	3	3
Marshall	5	4	4	1	3	2	2	3	0
Mayes	5	10	3	2	2	3	2	3	1
Murray	13	11	9	4	7	6	6	7	0
Muskogee	66	66	45	21	36	30	29	37	9
Noble	10	9	7	3	6	4	5	5	0
Nowata	7	9	5	2	4	3	3	4	3
Okfuskee	13	14	8	5	5	8	4	9	1
Oklahoma	557	582	463	94	412	145	359	198	78

1. Source of Information: *American Medical Directory, 1950* (Chicago: American Medical Association, 1950).
2. Source: State Board of Medical Examiners, *Medical Laws of Oklahoma: Official List of Licensed and Registered Physicians and Surgeons*, January, 1954.
3. These projections were obtained by subtracting expected deaths from the number of physicians in each county in 1950.
4. The information on students in medical school was taken from, *The University of Oklahoma Bulletin: Issue for the School of Medicine*, Oklahoma City: August 15, 1954. No tabulation was attempted for the few residents of Oklahoma attending other medical schools.

State	Number of Physicians 1950[1]	Number of Physicians 1954[2]	PROJECTED NUMBER OF PHYSICIANS[3] 1960		1965		1970		Number of Medical Students,[4] University of Oklahoma, 1954
			Surviving from 1950	Deceased since 1950	Surviving from 1950	Deceased since 1950	Surviving from 1950	Deceased since 1950	
Okmulgee	38	29	24	14	19	19	16	22	6
Osage	20	21	14	6	11	9	9	11	1
Ottawa	28	26	19	9	15	13	12	16	6
Pawnee	11	9	6	5	5	6	3	8	1
Payne	39	36	31	8	27	12	24	15	11
Pittsburg	35	30	26	9	21	14	17	18	6
Pontotoc	41	33	31	10	26	15	22	19	5
Pottawatomie	34	29	25	9	20	14	17	17	9
Pushmataha	6	4	3	3	1	5	1	5	1
Roger Mills	4	2	4	0	3	1	3	1	1
Rogers	11	10	7	4	6	5	4	7	2
Seminole	22	22	16	6	13	9	10	12	12
Sequoyah	8	5	4	4	3	5	2	6	3
Stephens	24	22	19	5	16	8	13	11	6
Texas	12	10	9	3	8	4	7	5	3
Tillman	10	10	7	3	5	5	4	6	4
Tulsa	330	331	265	65	230	100	195	135	40
Wagoner	6	7	3	3	2	4	2	4	1
Washington	35	36	25	10	20	15	16	19	7
Washita	9	9	6	3	4	5	4	5	5
Woods	10	11	7	3	6	4	6	4	4
Woodward	22	20	15	7	12	10	10	12	5

Summary and Conclusions

1. In Oklahoma, as in the rest of the United States, during recent decades the number of physicians practicing in smaller towns and villages has declined rapidly. More and more young medical practitioners have gone to the large cities, leaving few doctors, primarily older ones, in the rural areas.

2. Since World War II, health authorities have become very cognizant of a need for more medical personnel in smaller communities. The American Medical Association and most State Medical Associations, including that of Oklahoma, have placement programs which aid in developing a better distribution of doctors to the mutual advantage of physicians and the public.

3. To formulate a sound placement program, relevant statistics are essential. This paper projects mortality and survivals among physicians living in the state in 1950 by county and size of town for 1960, 1965, and 1970. Data of this type indicate replacement needs to maintain the present distribution. The information should be valuable to a practitioner considering a new location.

Table 3. Number of physicians in Oklahoma by size of town for 1950 and projections based on 1950 data to 1960, 1965 and 1970.

Size Of Town	Number of Physicians 1950	PROJECTED NUMBER OF PHYSICIANS 1960		1965		1970		Number of Medical Students University of Oklahoma, 1954
		Surviving from 1950	Deceased since 1950	Surviving from 1950	Deceased since 1950	Surviving from 1950	Deceased since 1950	
2500 & Over	1801	1405	396	1212	589	1029	772	304
2000-2499	44	30	14	24	20	20	24	8
1500-1999	66	42	24	33	33	26	40	19
1000-1499	75	48	27	37	38	29	46	10
750- 999	33	22	11	16	17	12	21	9
500- 749	67	34	33	23	44	15	52	11
250- 499	58	29	29	19	39	11	47	13
Under 250	20	10	10	6	14	3	17	14

4. The projections show considerable variation among counties in expected deaths. Potential needs vary accordingly. The rural areas, with disproportionate incidences of old physicians and high physician death rates, account for most of this variation. Many replacements are needed (68 per cent by 1970 in towns of less than 2500 population) in the smaller towns in order to maintain the present distribution of M. D.s in Oklahoma. Also, the need will be greater in eastern than in western Oklahoma.

5. The University of Oklahoma Medical School is graduating a sufficient number of doctors to replace those dying each year, if the same percentage of graduates remain in the state in the future as has in the past. However, the vast majority (78.4 per cent) of the students came from cities. They will tend to return to cities of the same size to practice. Without counteracting steps, one can predict a further concentration of physicians in the cities of Oklahoma.

6. Projections indicate the greatest replacement needs and opportunities for the practice of medicine in Oklahoma appear to be in those towns with populations between 750 and 2500. (Very few towns with less than 750 inhabitants can support a doctor.) Yet, there is no trend for practitioners to locate in these communities. Recently State Medical Placement groups have attempted to get more doctors to locate in centers of this size. However, medical authorities alone cannot increase greatly the number of physicians in these towns. Small communities must take cooperative action if they are to get new personnel and, above all, support the practitioners locating in rural areas.[14]

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1. Frank G. Dickinson, *Distribution of Physicians by Medical Service Areas,* Bulletin 94, Bureau of Medical Economic Research, American Medical Association, 1954, p. 63.
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Phelps Named GP Official

Malcom Phelps, M.D., El Reno, was named Vice-President of the American Academy of General Practice, at the 1955 scientific assembly of the organization held in Los Angeles in March. He was also unanimously elected chairman of the A.A.G.P. Board of Directors.

Doctor Phelps, who served as the first president of the Oklahoma Chapter and was a charter member of the Academy, is a Delegate from Oklahoma to the American Academy and a member of the A.A.G.P. Board of Directors. He also served as chairman of the A.A.G.P. commission on public policy.

Doctor Phelps is chairman of the Oklahoma State Medical Association Legislative Committee, has previously served as chairman of the Public Policy committee and is an alternate delegate to the A.M.A.

In 1953 Doctor Phelps was selected by the O.S.M.A. to be its representative on the Oklahoma Industrial Tour which was made up of 300 of Oklahoma's leading business men and industrialists who toured 12 cities in the eastern part of the U. S.

Doctor Phelps was recently appointed by the Governor to the Oklahoma Crime Study Commission, organized to study juvenile delinquency.

Doctor Phelps was graduated from the University of Iowa School of Medicine in 1929.

Emergency Treatment of

CHEST INJURIES

ALLEN E. GREER, M.D.

Chest injuries among civilians most commonly are the result of car accidents and are very often associated with trauma of the musculoskeletal system, head and abdominal organs. Less commonly the injury is from a stabbing or shooting. Many of these patients die within a few minutes and combinations of injuries may be fatal from their magnitude. This type of trauma is serious; for instance, an estimated 10 to 20 per cent of the patients with complicated rib fractures die.[1,2]

The immediate danger of the injury is the result of a disturbance of the cardiorespiratory mechanism; an added factor may be hemorrhage. The late dangers are infection of the chest wall and pleural space, delayed hemorrhage, late complications of retained foreign bodies, and chronic crippling of the respiratory system as a result of neglected hemothorax and destroyed lung tissue.

For respiration, one must have: (1) An intact thoracic cage capable of producing movement of air required for gaseous exchange; (2) A patent tracheo-bronchial tree; (3) Sufficient functioning alveoli to carry on an exchange of gases. These are fundamental conditions, and many of our efforts in caring for a patient with a chest injury are directed toward maintaining these three things. Serious respiratory distress usually arises from a combination of factors, and all must be treated.

One cannot stress too much that the chest wound may not be the only significant injury and is often associated with other problems such as fractures of the long bones and pelvis, and injuries to the head and abdomen. Because of their nature, thoracic injuries may very often take precedent in the treatment. In serious cases, there is seldom time to do a careful examination or use all the diagnostic aids that are necessary for complete evaluation. A rapid and as complete an assay as time will permit should be done. Failing respiration, shocks, or other emergencies should be recognized. As soon as the emergency is over, a complete examination must be done, and one can carefully rule out associated injuries of the head, extremities, and abdomen.

THE AUTHOR

Allen E. Greer, M.D., Oklahoma City, attended Oklahoma A. and M. College and was graduated from the University of Oklahoma School of Medicine. He interned at Colorado General Hospital, Denver, and served residencies in surgery and thoracic surgery at Cleveland Clinic, Bellevue, New York, and the Good Samaritan Hospital, Los Angeles. He is a member of the American Board of Surgery and the American Board of Thoracic Surgery.

First Aid Measures

If by chance one is on the scene of the accident, he may carry out measures in addition to the usual first aid measures given to injured individuals:

1. Open sucking wounds require priority treatment by packing, occlusive dressings, or sutures. (One may use adhesive, rubber sheet, oil cloth, clean clothing, etc.)
2. Paradoxical motion of the chest wall must be immobilized by firm pressure dressings with adhesive, by a belt, or by shot bags or sand bags.
3. Relief of tension pneumothorax by aspiration with a needle with flutter-valve.
4. Erect or semi-erect position with the injured side most dependent will aid respiratory motion and lessen the chance of flooding the good lung.
5. Sedation in small amounts to allay fear and ease pain. (Demerol is preferred so that respiration is not depressed.)
6. Oxygen.
7. Blood or blood substitutes.

These first aid measures are performed in the emergency room if they have not already been carried out. In addition, measures to clear the airway should be done by encouraging coughing, or by, tracheal aspiration, bronchoscopy, or tracheotomy. While resuscitation is being performed, the blood count, hematocrit, urinalysis, and chest roentgenograms may be taken.

The roentgenographic study is very often of considerable aid in the treatment. These roentgenograms should be taken in the upright position if the injury will permit. Very often a satisfactory film can be obtained by an AP view in which the patient is momentarily raised into the upright position. Use of the upright position is especially important in differentiating fluid from contused lung and in outlining the dome of the diaphragm in patients suspected of having traumatic rupture of the diaphragm or rupture of hollow abdominal viscus. Frequent roentgenograms are necessary to follow the patient adequately, as conditions may change from hour to hour and day to day.

Discussion of the emergency treatment is best considered under these headings although they commonly occur in various combinations:

1. Fracture of ribs
2. Loss of stability of the chest wall
3. Contused lung
4. Pneumothorax
5. Hemothorax
6. Retained foreign bodies
7. Abdomino-thoracic wounds
8. Cardiac injuries
9. Traumatic asphyxia

Fracture of Ribs

The most common of all injuries of the chest is rib fracture. The treatment of uncomplicated fracture of the ribs is simply the relief of pain associated with the fracture. The best treatment for relief of pain is had by intercostal nerve block with a local anesthetic agent. Immediate relief can be obtained by using procaine, which is followed by an injection of 1 cc. of Nupercaine in oil while the needle is still in place. Because of the overlapping distribution of the intercostal nerves, at least one intercostal nerve on either side of those fractured must be injected in addition to those nerves corresponding to the ribs fractured.

Medication for relieving pain is in order, and demerol is preferred to other agents as it depresses respiration very little. After three or four days, better relief may be had with salicylates and codeine orally.

Very seldom should one splint rib fractures with adhesive or binders. Although such a splint effectively reduces pain, it does so by decreasing respiratory excursions and thereby enhances the development of the wet lung syndrome, atelectasis, or pneumonitis and will be discussed in more detail under the treatment of contused lung. These complications are particularly prone to develop in elderly patients whose chest wall is splinted by adhesive strapping. Patients with simple rib fracture should be encouraged to cough, move about, and be ambulatory if possible. Antibiotics are in order in older patients to aid in preventing pneumonitis.

Marked displacement of the fractured ends of the ribs is usually of little importance, as healing occurs with the ends of the fracture in good or poor position without loss of function.

Another complication of multiple fractures of ribs is abdominal distention due to ileus. This is treated as any other case of ileus with parenteral fluids, gastric aspiration, and prostigmin. As the ileus resolves, diet and fluids as tolerated are ordered. If the fractures are severe, it is better to anticipate abdominal distention and limit oral intake to clear liquids for a few days. Ileus may develop despite this precaution and may necessitate treatment.

Sucking wounds of the chest require emergency closure of the wound; and after resuscitation has been carried out, debridment and closure under endotracheal anesthesia must be performed.

Loss of Stability of the Chest Wall

When the driver of an automobile is thrown against the steering wheel he sustains the so called "stove-in-chest." This condition is usually due to multiple fractures of adjacent ribs anteriorly and posteriorly or from fractures of the sternum or costochondral junctions of the ribs and sternum. The loose segment moves in a direction op-

posite from that of the normal intact chest wall, and this motion is called paradoxical motion and has been very aptly described as "rowboat respiration." This abnormal motion causes ineffectual respiration, as there is failure of normal intrathoracic negative pressure and thus a poor exchange of gases. The respiratory effort, instead of producing movement of air, produces movement of the loose portion of the chest wall. Also, because of loss of normal intrathoracic negative pressure, the great vessels and heart do not fill properly with blood. These patients labor to have sufficient exchange for life. Respiration is further limited because of extreme pain as a result of marked motion at the fracture sites. There is usually dyspnea, cyanosis, and tachycardia.

The emergency treatment consists of immobilizing the area with strapping or sand bags. The definitive treatment is some sort of traction on one or more ribs of the detached segment.[3] Such traction may be obtained by towel clips or wires inserted under local anesthesia. It is much less painful to strip the periosteum off the rib so that this and the adjacent intercostal nerves are not included in the traction. If open thoracotomy is indicated for other reasons, fixation can be performed by wiring or bone pegging.

Tracheotomy should be done in most of these instances, as it decreases the dead space and lowers the resistance to respiration. It makes respiration quieter, easier, and it decreases the movement of the loose segment.

Contused Lung

Contusion of the lung may be caused by non-penetrating wounds and is always present to some degree when there are penetrating wounds. It actually is a hemorrhagic pneumonitis and is characterized by blood and fluid in the interstitial tissue and in the alveoli. Contusion of the lung may occur without fracture of the ribs, especially in young adults and young children.

These patients have local pain; they cough, and often raise blood-streaked or frankly bloody sputum. Moist rales are heard on auscultation with signs of consolidation. Clinically, the condition is characterized by a constant wet cough with rhonchi, despite the fact the patient is coughing and raising some sputum. A stethoscope held near the open mouth reveals crackling rales on respiration. The roentgenogram frequently shows an opacity in the area varying from a small amount to consolidation of one entire lung or parts of both lungs. Contused lung is easily confused with hemothorax and atelectasis, and of course it may accompany them. When the lung is extensively contused, there is serious interference with respiratory exchange because of loss of lung tissue and secondarily because of filling up of adjacent alveoli and bronchi with blood and tissue fluids.

Just such a situation exists in traumatic wet lung syndrome[4]; fluids are present to such a degree that the patient may literally drown in his own secretions. This moisture results in part from reflex secretions from the bronchi secondary to and perpetuated by trauma, pain, anoxia, tracheal obstruction, ineffectual cough, prolonged anesthesia, instability of the chest wall, loss of cough reflex as a result of over-sedation, immobility and shock, and unconsciousness owing to head injury. Pre-existing bronchial disease such as bronchiectasis will aggravate the syndrome.

Treatment of contusion of the lung consists essentially of preventing the complications of wet lung syndrome, pneumonitis, and atelectasis.

1. Oxygen if indicated by pulse rate more than 100 or cyanosis.
2. Prophylatic penicillin in all cases.
3. Relief of pain so patient can cough effectively and breathe deeply.
   a. Intercostal nerve blocks.
   b. Judicious use of demerol and salicylates with codeine.
   c. Fixation of loose segments of chest wall.
4. Maintenance of open airway.
   a. Encourage patient to cough.
   b. Tracheal aspiration.
   c. Bronchoscopy.
   d. Tracheotomy.
5. Change position frequently; toe and foot exercises.
6. Hydration without overhydration; one must use care in administering saline.
7. Early ambulation if possible.

Any patient who is having difficulty

eliminating the tracheal or bronchial secretions must be given assistance if adequate respiratory exchange is to be maintained and if atelectasis and resultant pneumonitis is to be avoided.

Pneumothorax

Air gains entrance to the pleural space from laceration of the lung or bronchus or from an open chest wound. The presence of air is not serious unless it is producing tension pneumothorax or unless it is persistent. An upright x-ray of the chest aids in the diagnosis and in following the patient. The treatment consists of removing the air. If there is no respiratory difficulty it is well to wait 12-24 hours for the leak in the lung to seal; then aspiration of 1,000 to 2,000 cc. of air should be done daily until the lung is fully expanded. Signs of excessive negative pressure indicate the need for stopping aspiration at that time. These signs are pain, tachycardia, faintness, pallor, feeling of pressure in chest, and shock. Early obliteration of dead space is important to avoid the complications of pneumothorax, i.e, pleural effusion, empyema and nonexpandable lung as a result of visceral peel. If the lung is not re-expanded in 7-10 days, the cause for persistent air leak should be sought. It may be bronchial fistula, foreign body, peel on the lung, or rib fragment in the lung.

Tension pneumothorax is that condition in which air gains access to the pleural space through a valve-like mechanism. By preventing escape of the air, this mechanism causes collapse of the lung and shift of the mediastinum. Symptons depend upon the rapidity of occurrence and are those of respiratory embarrassment. The emergency treatment is to insert a needle into the chest and allow the escape of air; this may be done by aspiration or by tying a rubber glove or condom to the end of a needle for a flutter valve. If facilities are available, insertion of an intercostal tube with under-water drainage is the best treatment. The tube can be inserted anteriorly by making a small incision in the skin and forcing a hemostat into the pleural space just above the third rib. A catheter is then inserted by means of a catheter guide; a Foley bag catheter is good, for inflation of the bag aids in holding the catheter in place. The tube is then connected to a tube leading under water. It is rarely necessary to do an open thoracotomy except for pneumothorax due to rupture of a large bronchus, trachea, or esophagus.

Subcutaneous emphysema is important, for it may denote the more serious underlying problem of tension pneumothorax, bronchial leak, tracheal rupture, or esophageal tear. Occasionally it is seen with rib fractures and without pneumothorax; in such instances an obliterative pleuritis is present and prevents collapse of the lung. It is never necessary to make multiple incisions in the skin, as the air is absorbed once the underlying cause has been treated.

Hemothorax

Bleeding into the pleural space most commonly occurs from lacerated lung, an intercostal, bronchial or internal mammary vessel. The early dangers of hemothorax are: 1. Shock from blood loss, and 2. disturbance of cardio-respiratory system due to accumulation of blood in the chest. Late dangers are: 1. Infection, 2. fibrothorax, and 3. impaired respiration from these.

Bleeding from the lung usually ceases spontaneously. Continued bleeding is usually the result of bleeding from a systemic vessel—that is, an intercostal, bronchial, or internal mammary artery. A patient who is in shock is usually bleeding from one of these systemic vessels. If he relapses into shock after responding to resuscitative measures, exploratory thoracotomy should be carried out under general endotracheal anesthesia while supportive therapy is continued.

Blood in the pleural space following chest injury is dangerous, and evacuation should be the main objective in the therapy after replacement of blood and resuscitation. If bleeding ceases, it is best to wait 18-24 hours before aspirations are begun. Aspiration should be then done daily until the pleural space is free of blood and the lung is fully expanded. Signs of negative pressure should be observed as in the removal of air. It is unwise to replace the blood with air, as this procedure may cause loculation of the blood and more difficulty with successive aspirations. A good rule is to follow each aspiration with injection of 300,000 to

500,000 units of aqueous penicillin for prophylaxis against infection, which is prone to occur in such an excellent culture medium. Likewise, parenteral antibiotics are in order.

At times aspirations are difficult because of the injury or associated injuries, or, because of poor cooperation from the patient. A thoracotomy tube placed in the seventh or eighth interspace in the posterior axillary line and connected to a waterseal suction bottle will provide for continuous drainage of the pleural space in such instances.

If clotting occurs and aspirations are not effective, enzymatic debridment with streptokinase and streptodornase[5] or tryptar are in order. Streptokinase and streptodornase have given good results for the author, and the first dose is usually 200,000 units of streptokinase and 100,000 units of streptodornase. Subsequent use usually requires larger and larger amounts. Streptokinase, the effective enzyme, is increased to 300,000 units on the second injection and to 400,000 units on the third injection if one is necessary. The chest is aspirated (or the tube unclamped should a thoracotomy tube be in place) after eight to 24 hours. At times the reaction is so severe and the accumulation of fluid so great that the fluid must be removed in a few hours. If no alarming symptons arise, it is better to let the enzymes stay in for 24 hours, as their activity persists for this length of time, although the first six-eight hours is the time of most marked activity. Aspirations are done daily until the chest is clear or the amount of fluid obtained is small. If a good deal of clot persists, a second or third injection is performed, usually on the third to fifth day.

If these measures fail and considerable clot remains, the patient is followed for three to six weeks. If there is still thickening of the pleura at the end of this period, a decortication should be performed.

Retained Foreign Bodies

The dangers of a foreign body in the lung are usually late and are hemorrhage and infection. Most objects more than a cm. in diameter should be removed. If the instrument causing the wound is protruding from the chest, such as large splinter or knift blade, it should be removed in the surgery when preparations have been made for open thoracotomy.

Abdomino-Thoracic Injuries

Abdomino-thoracic injuries result from an opening in the diaphragm which allows the abdominal organs to herniate into the chest. This type of injury should be suspected when a patient has a stab or bullet wound near the diaphragm, when he has fallen from a height or when he has been crushed. The roentgenographic study, which is especially important, usually shows lack of continuity of the diaphragm, a higher than normal diaphragmatic shadow, or loops of gut in the thoracic cavity. To aid in the differentiation these patients should have roentgenograms in an upright position or as near upright as possible. This position will bring out fluid—and gas-filled gastrointestinal organs that may not be visible on supine films, since fluid gravitates posteriorly and does not give a contrasting appearance with air. A Levine tube often gives temporary relief by deflating a distended stomach, and this can also be seen in an abnormal position in the thorax on the x-ray.

These patients are ill from cardio-respiratory disturbance as a result of displacement of the thoracic organs. They usually have multiple injuries and are seriously ill; nevertheless, they are surgical emergencies, and one should do an open thoracotomy with repair of the diaphragm and any injured abdominal organ as soon as the condition is recognized. If they survive the injury without surgical repair, the late complications of intestinal obstruction are prone to occur, therefore, no patient with a suspected diaphragmatic injury should be allowed to leave the care of a physician without a barium enema and upper gastro-intestinal series to exclude herniation.

Cardiac Injuries

Some cardiac injuries are fatal instantaneously. If the injury is from a stabbing or shooting, bleeding may cease, and one is concerned only with a cardiac tamponade. This should be suspected when the heart sounds become faint, the systolic blood pressure falls, and venous engorgement is evidenced by distended neck veins. The pulse is often paradoxical. An enlarging cardiac shadow on the x-ray is significant. These changes are due to a rather sudden increase in pressure on the heart which interferes with blood flow to the heart, and

causes an increase in pressure in the vena cavae and entire venous system. If the pericardium is torn so that it communicates with the pleura, the blood will escape into the pleura space and there will be evidence of hemothorax and shock from blood loss, conditions which do not respond to resuscitative measures.

Emergency treatment includes oxygen and blood replacement. Recent reports verify the fact that pericardicentesis may be life-saving and also be definitive therapy.[6] The aspiration should be done in the semi-erect position or prone position through the fourth left interspace or subxiphoid route. A subsequent aspiration may be necessary. If the patient responds only to lapse again into difficulty, continued bleeding should be suspected and open exploration performed.

Traumatic Asphyxia

This unusual injury is caused by violent but temporary compression of the thoracic cage which lasts for a few seconds to minutes and is associated with severe crushing injuries. There is a diffuse ecchymosis of the face, neck, and upper thorax, and it may involve the upper extremities. The pathognomonic discoloration is the result of sudden, marked rise in intrathoracic pressure. This rise in pressure exerts an effect on the thin-walled veins of the mediastinum, and blood is forcibly ejected out of the thorax into valveless veins of the head and neck. The cyanosis is unique and intense, and it is characterized by petechial hemorrhage into the skin, protusion of the eyes, edema of the eyelids, and subconjunctival hemorrhages. The color later changes to vivd purple, and the line of demarcation is rather abrupt. Submucus and subcutaneous hemorrhage may occur if the pressure is very long continued. The petechia are the result of rupture of venous capillaries; the early bluish to slate gray color is caused by venous congestion, but later there is actually extravasation of blood. If uncomplicated by other injuries to the contents of the chest, there is recovery in 7-18 days. Treatment consists of rest, sedation, oxygen, and good nursing. A careful examination for pneumothorax, hemothorax, mediastinal emphysema, and other injuries should be made. An electrocardiogram may reveal a bruise of the heart muscle.

Other injuries do occur but they are of less frequency than the injuries described. It is well to remember some of them, such as traumatic chylothorax as a result of rupture of the thoracic duct, esophageal and tracheal tears, and aneurysm as a result of injury of the large blood vessels. Lastly, these patients require general care, as do all injured or postoperative patients, and efforts should be made to avoid other complications such as phlebothrombosis and pulmonary embolism.

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Postgraduate Education in the Bahamas

With the agreement of the Chief Medical Officer of the Bahamas, facilities for lectures and clinical demonstrations at the New Bahamas General Hospitals have been provided for doctors who spend their holidays in Nassau. Eminent medical men from both sides of the Atlantic will be invited as guest speakers. Future details may be obtained from Dr. B. L. Frank, Organizing Physician, 1290 Pine Avenue West, Montreal, Canada.

POLIOMYELITIS

CARROLL M. POUNDERS, M.D.

THE AUTHOR

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During the past half century the one disease which has caused the most fear and anxiety in this country and has been the subject of much expensive investigation is poliomyelitis. Out of the many hazy ideas regarding its nature, there has gradually unfolded a fairly clear image of its true form. This is an effort to review the main points of this knowledge.

It is caused by a group of the smallest known viruses that are not well defined even by the electron miscroscope. The three known types are: I (Brunhilde), II (Lansing) and II[1] (Leon). They have been identified by (1) their physical and chemical properties, (2) disease characteristics resulting from inoculating certain laboratory animals, (3) known cytopathogenic changes in tissue culture and (4) immunologic characteristics.

A limited range of susceptible hosts has made it dificult to work with these viruses, but does not seem to hamper their epidemiologic spread. They are pathogenic for man and other primates and more recently have been adapted to certain rodents. They were first grown on human embryonic brain tissue by Sabin and Olitsky in 1936.[1] Since then they have been found to grow on such human tisues as skin, muscle, intestine, foreskin, kidney, uterus, adult testes and cells from carcinoma of the cervix as well as from the testes and kidneys of monkeys. As a result, the cumbersome procedure of measuring antibodies to the three immunologically different types by inoculating animals has given way to in vitro neutralization tests using tissue cultures. Also two types of complement fixation tests have been reported.

It seems to be on the increase in this country, but improved accuracy of diagnosing and reporting, raises some question as to just how much actual increase there has been. Although sporadic cases occur at any season and there have been a few cold weather outbreaks, epidemics usually start in the late spring and summer, lasting into the fall. Up to 25 years ago 80 to 90 per cent of all patients were under five years of age, but since then a change in age selection has been noted with a decreasing number of infants and an increasing proportions of persons over 15 years of age being affected. The shift to the older age groups appears greater in the families of higher economic status and it is seldom seen at all under one year. The attack rate is higher and the disease more severe in the suburban and rural areas. There is a relatively high degree of susceptibility among pregnant women.

Epidemics appear more frequently in countries and communities with unusually good sanitation facilities and hygienic standards. There is a general belief that where poor hygienic standards exist, children at a very early age undergo repeated, unrecognized subclinical attacks which stimulate immunity, leaving an insufficient number of susceptible persons to produce an epidemic.

Because of the multiple immunologic types of virus that do not produce cross immunity, persons who have had a previous attack do not seem to be protected. Direct person to person contact is thought to be the method of spread, with the possibility of flies playing a part. The alimentary tract is the most likely portal of entry with the intestinal-oral circuit being the prominent feature. A viremia has been found to exist during the incubation period. The virus is recovered

from throat swabs taken during the first week of illness and is excreted in the stools as long as eight weeks in many cases. Abundant quantities of virus have been found in sewage from epidemic areas and foods contaminated by flies in such areas are capable of infecting chimpanzees.

The general belief is that, at least during epidemics, infection is fairly common and widespread, producing mild symptoms of short duration. Relatively few of these infected persons are definitely diagnosed; still fewer show any paralysis and only a small per cent develop permanent crippling. Various estimates are that there are from 10 to 100 infected persons for every one that develops paralysis. These are divided into (1) healthy carriers, (2) abortive cases and, (3) non-paralytic cases. The abortive infections last from a few hours to a few days with fever, headache, sore throat, nausea, vomiting and often abdominal pain or uneasiness. The spinal fluid is normal. The non-paralytic illness shows the same symptoms with the addition of pain and stiffness in the back and neck, and possibly in the extremities. The spinal fluid usually shows an increase in the cell count and in the protein content.

About one-half of the paralytic cases manifest a biphasic form in which the first phase is identical with the abortive type with apparent recovery. After a period of one to seven days more severe symptoms return with evidence of invasion of the nervous system. The two phases may merge or the first one may be overlooked. There is stiffness of the neck and back, causing the patient to sit in the tripod position, bracing himself with the arms extended behind him. He may be restless and apprehensive, sometimes drowsy or stuporous. The deep tendon reflexes are apt to be exaggerated at first, but later diminished or absent. Pain, tremor or hyperesthesia in an extremity often foretell later paralysis. Muscle pain varies, is apt to occur in the early stages, but sometimes persists for weeks. It is usually in the back, sometimes in the legs and in older children or adults may be severe, especially at night. Paralysis usually begins during the first week before the fever has completely subsided and gradually progresses. The legs are more commonly involved than the arms and the most frequently affected groups of muscles in the order named are, (1) the anterior tibials, (2) the peroneals and, (3) the quadriceps extensor femoris. In the upper extermities the shoulder girdle group, especially the deltoids are more apt to be involved. When the shoulder group is involved there is always a possibility of respiratory trouble. When the third to the fifth segments of the cord are involved, paralysis of the diaphragm results, being recognized by the absence of the diaphragmatic excursion and actual retraction of the upper abdomen with each inspiration. Constipation is common and urinary retention should be watched for, especially in older patients. Once the paralysis has developed to its fullest extent, there is little change for a period of days or weeks. Improvement starts first in the muscles last affected and may be expected to progress for as long as 18 months and then stop, except in occasional instances where it goes on for two or three years. By the end of six to eight weeks atrophy of the affected limb becomes noticeable, its circulation may be poor, often resulting in its being bluish and cold.

The bulbar form is serious because of the involvement of the motor nuclei of the cranial nerves and the respiratory and circulatory centers of the medulla, but it is by no means always fatal. Its incidence varies in different outbreaks from six to 20 per cent. The nerves commonly affected in the order of their frequency are the tenth, seventh, eleventh, sixth, twelfth and fifth. The great danger is from possible involvement of the respiratory or vasomotor centers. When the respiratory center is involved, one must watch for irregularities in rhythm and depth of breathing, a tendency toward shallowness with periods of insufficiency. The temperature may go very high, the blood pressure may be quite elevated only to fall to shock levels as the patient shows confusion, delirium, coma and then ceases to breathe. With involvement of the vasomotor center the pulse is apt to be extremely rapid, irregular and hard to palpate, while the blood pressure changes from high to low levels with a small pulse pressure. The patient is markedly restless, looks anxious with a dusky, red appearance of the skin which becomes cold

and clammy with a mottled cyanosis. With fatal termination, the heart stops beating before respirations cease.

The Landrys type sometimes occurs with an ascending paralysis from the feet to the trunk and upward with involvement of the respiratory muscles or vital centers in the medulla and death.

No specific diagnostic laboratory procedure is available. During the warm weather season or when the disease is prevalent, such symptoms as headache, sore throat with pain in the back, legs or abdomen, should alert one to the possibility of its presence. If there is tightness of the neck, back and hamstring muscles, the diagnosis is more imminent and a spinal puncture should be done. There is usually increased cell count, ranging from 20 to 500 per cu. mm., predominately mononuclears although polymorphonuclears may be in the majority at first. About ten per cent of all cases show no pleocytosis. The protein content is generally increased while the sugar and chloride levels are normal and cultures are sterile.

Infection by the coxsackie group of viruses presents a confusing problem, since it may appear at the same time as an outbreak of poliomyelitis; in fact, both groups of viruses have been recovered from the same individual. To differentiate them requires special laboratory procedures that are not usually available and where the above described clinical and laboratory evidences are present, especially if there is asymetrical flaccid paralysis, a diagnosis of poliomyelitis is justified. Mumps meningoencephalitis, in the absence of parotitis, cannot be clinically distinguished from non-paralytic poliomyelitis, but specific complement fixation tests, red cell agglutination inhibition tests and methods of culturing the mumps virus from the spinal fluid are now available. Increased spinal fluid cell counts also occur in infectious mononucleosis. Certain types of encephalitis can be differentiated from poliomyelitis only by serological tests. The demyelinating encephalitis that sometimes follows vaccination for smallpox or rabies or as a complication of measles or chickenpox can usually be diagnosed by the history. Infectious polyneuritis (Giullain-Barre syndrome) is differentiated by the symmetrical distribution, tendency to affect the distal muscle groups more severely than the proximal ones, the frequent loss of sensation, the tendency toward complete and rapid recovery and by the normal spinal fluid cell count with high protein content. Post-diphtheritic polyneuritis and transverse myelitis can be confusing, especially if seen during the poliomyelitis season. Purulent and tuberculous meningitis may be labeled with an initial diagnosis of poliomyelitis, but this should be settled by the characteristics of the spinal fluid. Patients who do not move an extremity due to pain and tenderness resulting from acute rheumatic fever, osteomyelitis, trichinosis, scurvy or congenital syphilis, are sometimes mistaken for poliomyelitis and this is occasionally true in Sydenhams chorea where an affected limb may be weak or held quiet because of difficulty in coordination. Tick paralysis in some sections shows a widespread symmetrical paralysis.

During the early stages one may not be able to differentiate non-paralytic cases from those that are to develop paralysis. When paralysis occurs, it usually does so within a week or 10 days from the onset of symptoms, but intervals of two to four weeks have been described. As long as fever is present, paralysis may develop or increase. In recent outbreaks less than 50 per cest of the diagnosed cases have developed paralysis. It is generally estimated that not more than one fifth of the diagnosed cases will develop severe, handicapping paralysis while another fifth will have some degree of it that is either temporary or not seriously incapacitating. It is impossible to predict during the acute paralytic stage, how much recovery will take place, but the degree of recovery is inversely proportional to the severity of the paralysis. The death rate in different outbreaks varies from five to 10 per cent and the fatalities are fairly well limited to those with the bulbar type or with involvement of the respiratory muscles. Cases with only facial and palatal paralysis have a good outlook for recovery within a few weeks. Difficulty with swallowing always suggests serious possibilities and high fever with a rapid or irregular pulse are unfavorable signs. Many respiratory cases can be saved by the use of the

respirator, but every reasonable effort should be made to wean them away from it later and prevent their becoming permanent respirator cases.

Bed rest is the most essential part of the treatment during the acute stage. Activity and fatigue is thought to have much to do with whether a case will terminate as only an abortive or non-paralytic type rather than develop paralysis. For this reason during the warm weather season when the disease is known to be active, every child who presents symptoms comparable to those described in the abortive attacks should be kept in bed for two or three days after all symptoms have disappeared and should not be allowed outdoor activity for a week after being up. The cases actually diagnosed as the non-paralytic type should be kept in bed at least one week after disappearance of symptoms and should not be allowed to run and become fatigued for two or three weeks beyond this time. Gamma globulin, convalescent serum or drugs of any kind have no curative value. The non-paralytic cases may be treated just as well at home as in a hospital unless the home lacks proper accommodations or is at too great a distance from a physician or hospital for close supervision or a ready transfer if needed. An infected person kept at home does not necessarily endanger the rest of the family, since the virus can usualy be recovered from the stools of all of them. Sedatives may be used to lessen apprehension, relieve pain and promote rest, except when there is respiratory weakness. Every effort should be made to keep the patient comfortable and he should be allowed to assume whatever position best serves this purpose. Moist heat over affected muscles has been used for many years and more recently it was emphasized and popularized by Elizabeth Kenny. It helps relax tight muscles, relieve pain and in connection with other physiotherapy it tends to correct deforming tendencies and to increase range of motion. Complete hot packing to the entire patient adds to his discomfort and is probably unnecessary in most cases. Hot baths are about equally effective and may be especially useful for small children. When hot packs and hot baths are used regularly, salt tablets should be allowed to replace chloride loss. Complete rest on a firm bed with a footboard to prevent footdrop should be the rule during the acute stage. Urinary retention is common in older patients and may sometimes be relieved by a parasympathetic-comimetic drug, such as Furmethide, but more often catheterization is necessary. Small doses of prostigmine may help abdominal distension and constipation. When pain subsides, gradual attempts at passive motion and muscle re-education by or under the direction of trained physiotherapists are in order and later, splints, braces and stabilizing operations become a part of the orthopedic care.

In most respiratory and bulbar cases, frequent suction and postural drainage are important in maintaining a clear airway. When these measures are insufficient, tracheotomy is necessary and it should be done early rather than as a last desperate effort. It is indicated in (1) an excitable patient who resists pharyngeal suction; (2) where there is accumulation of secretions in the airway of a stuporous or comatose patient; (3) inability to cough effectively; (4) fatigue and exhaustion due to obstruction; (5) poor color, shallow or irregular breathing or pulmonary complications such as atelectasis and pneumonia. Humidified oxygen can be given by intranasal catheter or through the tracheotomy tube. Liquids and nourishment must be kept up by the intravenous route where there is swallowing difficulty or danger from regurgitation and aspiration. When it is felt that there is no longer danger from regurgitation a polyethylene tube can be passed into the stomach and left there for feeding purposes.

It does not appear that such quarantine measures as closing schools prevent the spread of an outbreak. It should be made clear to people that the minor illnesses are probably just as infectious as the paralytic cases and have more to do with its spread. Susceptible persons should, as far as possible, stay away from households or communities where it is prevalent. Overfatigue and chilling should be avoided during an outbreak and uncooked vegetables and fruits should be thoroughly washed before being eaten. It is generally agreed that tonsillectomies should not be done during an out-

break. It has been found that gamma globulin inoculations are not effective for household contacts, but parents are apt to insist upon its being given. Its administration to pregnant women contacts is probably justifiable. There seems to be enough evidence of its effectiveness to warrant its use where cases occur among groups such as residents of apartment houses, housing projects, summer camps, day nurseries, classrooms and institutional groups. The following dosages are recommended for prophylaxis:

Under 6 months	2cc
Six months to 2 years	3cc
3 to 15 years	1cc per year
Pregnant women	20cc

The development of a vaccine by Dr. Jonas E. Salk, and its administration to 440,000 second grade school children in the spring of 1954, promises to be one of the greatest events in the entire history of medicine. The Vaccine Evaluation Center at the University of Michigan under the direction of Dr. Thomas Francis Jr., made a careful anaylsis of the records of the 1,830,000 children making up the entire study group. A total of 113 cases occurred among the 440,000 vaccinated children and 750 in the 1,390,000 controls. There were 71 paralytic cases, with no deaths, among the vaccinated group as compared with 445 parayltic cases and 15 deaths among the other group. The vaccine proved to be entirely safe and there was a very low incidence of side reactions. Doctor Salk feels that it can be safely given even during an outbreak.

The recommended dosage is one cc given intramuscularly, either in the deltoid or triceps and repeated in from two to four weeks, the longer time being preferable. A third or booster dose is then given not earlier than seven months after this. The first two doses produce a fairly good antibody response, but the booster dose seven months later gives a sharp rise in titer which might be expected to last over a period of several months or even years. There are no contra-indications to its use except during an acute illness. However in dealing with penicillin sensitive individuals it is well to remember that this drug is used in processing the vaccine. Children who received it during the field trial last year should have a booster dose this year.

The National Foundation for Infantile Paralysis is furnishing enough vaccine for the first and second grade school children throughout the country. It is available for use in private practice, but the supply will be limited for a while. Peference should be given to children from one to 12 years of age and to pregnant women.

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Eighth National Convention

The eighth national convention of the Medical Service Society of America, an organization of medical service representatives (detailmen) representing the ethical pharmaceutical houses, will be held May 21-22 at the Majestic hotel in Hot Springs National Park, Hot Springs, Arkansas.

Frank Cotten, Oklahoma City, president, announced that Dr. William Brooksher, president of the Arkansas Medical Society, will be the principal speaker at the convention banquet and that Leo E. Brown, AMA director of the department of public relations, will speak at the noon luncheon.

MSSA, which began in 1943 with the organization of a chapter at Dallas, Texas, now has active groups at Oklahoma City, Memphis, Tyler and Dallas.

Duer-Fetzer Clinic Opened at Woodward

Joe L. Duer, M.D. and Jack Fetzer, M.D., Woodward, have opened their new $25,000 fire proof, steel and concrete clinic in Woodward.

The 10 room air conditioned building consists of two examining rooms, two business offices, reception room, laboratory, x-ray laboratory, treatment room, utility rooms and a partial basement. Gray tile flooring and accoustical ceiling is used throughout the clinic with various shaded colors used in the different rooms.

Doctor Duer and Doctor Fetzer became associated in 1952. Doctor Duer began his medical career in 1939 in Woodward. Doctor Fetzer joined him after his tour of duty in the military service.

Association Activities

PRESIDENT'S LETTER

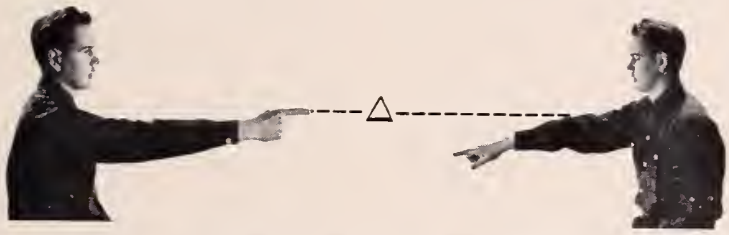
I should like to tell every member of the State Association that I have thoroughly enjoyed my year as president of the organization. My office has enabled me to meet many doctors over the state, and my knowledge of their work has increased my feeling of pride in our profession. Lack of time and conflicting dates prevented my attending some meetings to which I was invited, and I consider this my loss.

Several progressive moves have been made by our organization this year. Among these are three I want to mention especially. First concerns the Board of Medical Examiners. Legislative-wise, the Board secured the passage of two bills which will facilitate their work. Second, the House of Delegates authorized the building of a permanent office, and the site for this has been purchased and tentative drawings of the building have been obtained. Third, the executive office has installed a completely new recording and filing system which will simplify all the record-keeping.

I am very grateful for the cooperation of the members of the Council and the executive office. They have relieved me of a great responsibility and have made my year much more pleasant.

To Doctor Goodwin, our new president, I offer my wishes for a most successful year.

President



1. Bárány Pointing Test. *The patient points at a stationary object, first with his eyes open and then closed. A constant error in pointing (past pointing) with his eyes closed in the presence of vertigo indicates peripheral labyrinthine disease or an intracranial lesion.*

2. The Caloric (Bárány) Test. *The patient sits with his eyes fixed on a stationary object and the external ear canal is irrigated with hot (110 to 120 F.) or cold (68 F.) water. If the vestibular nerve or labyrinth is destroyed, nystagmus is not produced on testing the diseased side.*

3. The Rotation (swivel chair) Test. *The patient sits in a swivel chair with his eyes closed and his head on a level plane. The chair is turned through ten complete revolutions in twenty seconds. Stimulation of a normal labyrinth will cause nystagmus, past pointing of the arms and subjective vertigo.*

Notes on the Diagnosis and Management of "Dizziness"

I. Vertigo

The term "dizziness" (vertigo) should be restricted to the sensation of whirling or a sense of motion.[1] This sensation is usually of organic origin and is the tangible symptom of a specific pathology.

Moderate vertigo, with a sense of motion and a whirling sensation, may be produced by infection, trauma or allergy of the external or middle ear. Examination of the ear will usually disclose the abnormality.

Severe vertigo, which will not permit the patient to stand and causes nausea and vomiting, indicates an irritation or destruction of the labyrinth. The specific condition may be labyrinthine hydrops, an acute toxic infection, hemorrhage or venospasm of the labyrinth or a fracture of the labyrinth. Multiple sclerosis and pathology of the brain stem should be considered also.

It is important to learn if the patient's sensation is continuous or paroxysmal.[2] Paroxysmal vertigo suggests specific conditions: Ménière's syndrome, cardiac disease and epilepsy. Continuous vertigo without a pattern may be due to severe anemia, posterior fossa tumor or eye muscle imbalance.

Dramamine® has been found invaluable in many of these conditions. In mild or moderate vertigo it often allows the patient to remain ambulatory. A most satisfactory treatment regimen for severe "dizziness" is bedrest, mild sedation and the regular administration of Dramamine.

Dramamine is also a standard for the management of motion sickness, is useful for relief of nausea and vomiting of radiation sickness, eye surgery and fenestration procedures.

Dramamine (brand of dimenhydrinate) is supplied in tablets (50 mg.) and liquid (12.5 mg. in each 4 cc.). G. D. Searle & Co., Research in the Service of Medicine.

1. Swartout, R., III, and Gunther, K.: "Dizziness:" Vertigo and Syncope, GP *8*:35 (Nov.) 1953.

2. DeWeese, D. D.: Symposium: Medical Management of Dizziness: The Importance of Accurate Diagnosis, Tr. Am. Acad. Ophth. *58*:694 (Sept.-Oct.) 1954.

SEARLE

Comanche County

H. A. Angus, M.D., pioneer Lawton physician, was presented with an O.S.M.A. Life Membership certificate at a recent county medical society meeting. Doctor Angus was graduated in 1903 from the University of Iowa medical school and came to Lawton in 1905. He received a 50 Year Pin last year.

Garfield Kingfisher

Three pioneer physicians, two from Enid and one from Drummond, were presented with Fifty Year Pins at a meeting of the Garfield-Kingfisher Medical Society at Oakwood Country Club. Presentations to Roscoe C. Baker, M.D., W. H. Rhodes, M.D., and D. S. Harris, M.D., were made by R. Q. Goodwin, M.D., Oklahoma City, President-Elect of the O.S.M.A. All three physicians have been members of the Oklahoma State Medical Association since it was organized in 1907.

Doctor Baker, Enid, editor of the Garfield County Bulletin since 1934 when he was president of that society, received his O.S.M.A. Honorary Membership in 1953. He has practiced in Enid since 1920 having practiced at Covington, Granite and Arcadia previously.

Doctor Rhodes, who retired from practice in 1947, started practicing in North Enid in 1902 and later moved to Lahoma and Goltry coming to Enid in 1918 where he specialized in EENT.

Doctor Harris came to Drummond from Texas in 1906. On his birthday in 1949, several hundred of his friends honored him with a celebration in the Drummond city park.

Following the Fifty Year Pin presentations, C. M. Bieltstein, M.D., Oklahoma City, spoke on "Diseases of Children." A receptions. C. M. Bielstein, M.D., Oklahoma City, R. Hinson, M.D., Enid, was held at the home of Dr. and Mrs. W. P. Nielsen preceding the county medical society meeting.

Left to right — Roscoe D. Baker, M.D., Enid, and D. S. Harris, M.D., Drummond, stand by after receiving their Fifty Year Pins as President R. Q. Goodwin, M.D., Oklahoma City, attaches the pin to W. H. Rhodes', M.D., Enid, lapel. **(See story above.)**

Jackson County

Members of the Jackson County Medical Society met in Altus recently with two Oklahoma City physicians, Bill Bonds, M.D. and Robert Cranny, M.D., as guest speakers.

Carter-Love-Marshall

Members of the Tri-County Auxiliary entertained their doctor husbands with a dinner at Lake Murray Lodge March 27 in observance of Doctor's Day celebrated later that week. Physicians and their wives from Carter, Love and Marshall counties were present. Carter County physicians met earlier that month with the Carter County Bar Association when a guest speaker addressed the group on the preparation and presentation of medical testimony.

East Central

Leonard T. Eliel, M.D. of the cancer research division of the Oklahoma Medical Research Foundation was guest speaker at a meeting in Muskogee sponsored jointly by the East Central Society and the Veterans Administration Hospital of that city. Two guest speakers from Dallas also appeared on the program.

Tulsa County

John R. Schenken, M.D., professor of pathology at the University of Nebraska was a recent speaker at a meeting of the Tulsa County Medical Society.

Society Makes Donation In Speaker's Name

In lieu of an honorarium to guest speakers, at least one county medical society in the state has adopted a plan whereby a donation of $10.00 is made by the society to any organization designated by the speaker in his name.

Donald S. Lehman, M.D., Secretary of the Beckham County Medical Society, reports that the first donation was made to the Oklahoma Medical Research Foundation in the name of Charles E. Delhotal, M.D., Oklahoma City pediatrician who spoke at the Society's February 8 meeting. Doctor Delhotal designated the Research Foundation because of his interest in leukemia research.

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Book Review

AN HISTORICAL CHRONOLOGY OF TUBERCULOSIS. Richard M. Burke, M.D. 2nd edition. 126 p. illustrated, Charles C. Thomas, Publisher, Springfield, Ill., 1955.

The author of this small book, Richard M. Burke, M.D.,* is Assistant Professor of Medicine, University of Oklahoma School of Medicine and Director of Tuberculosis Control, Oklahoma State Health Department.

This second edition lists in chronological order the significant discoveries and events in the history of tuberculosis. Also included in the list are the pertinent discoveries in general medicine, as they go hand in hand with the progress in the fight against tuberculosis.

The subject is divided into four parts: Ancient Period (5000 B. C.-1600 A. D.) : Pre-Modern Period (1600-1800) : Modern Period 1 (1800-1881) : Modern Period 2 (1882-now). Koch's discovery of the tubercle bacillus in 1882 is used as the dividing line between the two Modern Periods. In the Ancient Period the author cites a few high points in Oritental Medicine. Then follows the Hippocratic Medicine when medicine began separating itself from priestcraft and philosophy. From then on treatment improved with the extensive study of the disease. After Koch's discovery came the powerful aids in diagnosis, the tuberculin test and the x-ray.

One valuable part of this book is its extensive bibliography, which was not included in its first edition, and for this reason it is especially valuable as a reference tool in a medical library.—Irma A. Beehler, Librarian, Tulsa County Medical Society.

*Now in military service.

DOCTORS IN THE SKY. Robert J. Benford, M.D. Charles C. Thomas, Publisher, Springfield, Illinois.

The mysteries of flight have fascinated man since the Ancient Greeks. The 20th Century doctor is no exception. To his scientific mind flight poses more than a mere application of practical physics; to him has fallen the frightening challenge of an unending series of new medical problems occasioned by aviation's jet-paced progress.

How modern physicians have met this responsibility is effectively told in *Doctors In The Sky*, a saga of organized aviation medicine. More properly, it is the story of the Aero Medical Association, which celebrates its 25th anniversary this year. Colonel Robert J. Benford, a flying doctor himself, takes the reader on a Cook's Tour of the organization, packing into his narrative a wealth of detail. Tracing the Association from its inception in 1929 through a quarter of a century of progress, the author has wisely skirted the early years for a greater emphasis upon the fascinating developments of World War II and the mid-century jet age. It is regretable that he has not dwelled at greater length upon these medical aspects and accomplishments rather than cluttering the book with the minutae of committee activities, business meetings, and convention proceedings—much of which, seen in retrospect, becomes singularly dry and statistical.

The real story of the Aero Medical Association is told in the warm personalities of its founders and members. Dozens of portraits—many quite delightful—have been drawn in carefully documented biographies. Of primary interest to Oklahoma doctors is the role played by a Tulsa ophthalmologist, the late Dr. James C. Braswell, a founder member and fifth President of the Association. A former professional baseball player and owner of a stable of racing horses, Jim

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Braswell was "an unusual, brilliant, unpredictable man." His interest in the Aero Medical Association, of which he was also business manager for many years (more or less as a hobby) contrasted strangely with his general lack of concern for any activities of organized medicine. To this tall, lanky, slow-spoken North Carolinan, the Association owes much of its success in the early days; when finances were slim, Doctor Braswell would dip into his own pocket to make ends meet. Much of the success of the *Journal of Aviation Medicine*, the Association's oficial publication (and generally accredited as one of the best scientific journals on the market), was due to his enterprise and business acumen. Oklahoma doctors will find in *Doctors In The Sky* a new picture of Doctor Braswell, whose death by cancer in 1946 ended an unusual career.

Doctor Benford has detailed the effort of the Aero Medical Association to make a recognized specialty of Aviation Medicine. The role of medicine in air commerce, the development of flight surgeons in airline companies, and the promotion of aviation medicine overseas are also carefully recorded.

Doctors In The Sky will be of primary interest to members of the Aero Medical Association and to physicians interested in aviation medicine. It is fundamentally a reference volume, invaluable as a collection of historical data and minutae of the organization. It will become more useful in the years to come, particularly in preserving the memory of the many personalities who have served the Aero Medical Association. Attractively printed and edited, *Doctors In The Sky* is a welcome addition to American medical history.—Jack Spears.

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THE CIBA COLLECTION OF MEDICAL ILLUSTRATIONS. Volume 2 Reproductive System. Frank H. Netter, M.D. Edited by Ernst Oppenheimer, M.D. Cloth $13.00 pp 286 with 233 plates. Ciba Pharmaceutical Products, Inc. Summit, New Jersey. 1954.

This is the second volume of the Ciba Collection of Medical Illustrations by Frank H. Netter, M.D. This volume is a collection of Netter's masterful illustrations on the normal and pathologic anatomy of the reproductive systems of both male and female. Some plates were taken from previous publications of the Ciba collection while others were newly executed for this volume. Each illustration is accompanied by pertinent explanatory legends and discussions carefully written and documented by a host of authorities. From developmental anatomy and functional gonadal relationship to the normal and pathologic anatomy of the reproductive systems and of the mammary glands, this composite group of illustrations is an exceedingly comprehensive undertaking.

Certainly numerous subject matters which make for completeness in stardard text books have been omitted. This has been acknowledged by the editors by stating that this volume should be treated as a supplement and not a replacement to standard reference works.

The ability of Netter to so beautifully portray and dramatize pictorally a complete narrative of an organ or disease, has certainly found no equal. This ability, plus the brief but informative discussion found accompanying each plate makes this volume a highly desirous portion of any physician's library, be he specialist or general practitioner. Furthermore, the picturesque quality of each plate serves not only as a concise review of each disease entity but gives the physician a pictoral model to use in discussions with his patients. Here, in brief, is an easily understandable, attractive and informative visual exhibit of the reproductive systems of the two sexes both in the normal and abnormal forms.—Eugene S. Cohen, M.D.

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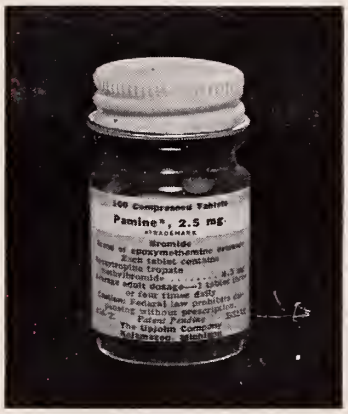

REVIEW OF MEDICAL MICROBIOLOGY. E. A. Jawetz, J. L. Melnick, E. A. Adelberg. Lange Medical Publications, Los Altos, Calif. 360 pages. $4.50. 1954.

The authors have fulfilled their intention of preparing a brief review of the current knowledge of the aspects of medical microbiology in the fields of clinical infections and chemotherapy.

The material is well organized. It is presented in a logical sequence and should be easily understood by those students new to the field. The inclusion of the sections on fundamental bacteriology is important for a basis for understanding the clinical phases of microbiology. The discussion of bacterial physiology will perhaps be overwhelming to new students. However, they will welcome the section on chemotherapeutic agents, which has been digested from a ponderous literature. Although the treatment of specific bacterial agents is brief, it is understood that this volume is not intended as a reference.

Because the text is brief, concise and yet complete, it will be a valuable one with which to imbue students of medical technology with a foundation in medical microbiology. They will, of course, require other texts as references for the more technical aspects of diagnostic bacteriology. However, this text will provide them with the necessary basic understanding of clinical infections, whether of bacterial, viral or mycotic origin, and the source, diagnosis, and treatment of these infections.—Clifton R. Gravelle, MT.

AMA President's Inaugural Ceremony To Be Broadcast

Highlights of the inauguration of Dr. Elmer Hess of Erie, Pa., as 109th president of the American Medical Association will be broadcast nationwide on Tuesday evening, June 7, during the Association's 104th Annual Meeting. The ceremonies will be held in the Ballroom of Convention Hall at Atlantic City, N.J.

An added attraction will be an address by the celebrated Norman Vincent Peale, D.D., pastor of the Marble Collegiate Church of New York City. Dr. Peale will speak on "The Relationship of Religion and Medicine."

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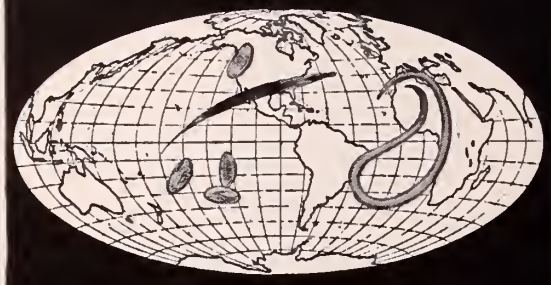

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Deaths

Arthur F. Hobbs, M.D.
1869-1955

Arthur F. Hobbs, M.D., retired Hinton physician, died March 12 at an El Reno hospital.

Doctor Hobbs was a Life Member of the Oklahoma State Medical Association and had received a Fifty Year Pin. He had practiced medicine for more than 54 years before his retirement in 1952. He was graduated from medical school in Kentucky in 1896 and practiced in Dunlap, Kans. and Bridgeport before coming to Hinton in 1908. During World War I, he served as an Army captain for more than a year at Base Hospital No. 51 in France. He was a member of the American Legion, Methodist church, Masonic Lodge, and Kiwanis club.

Survivors include the widow, three daughters, two sisters, four grandchildren and five great-grandchildren.

Dan F. Gray, M.D.
1875-1955

Dan F. Gray, M.D., Guthrie, died in an Oklahoma City hospital February 26 following brain surgery.

Doctor Gray, formerly of Ironton, Ohio, had practiced in Guthrie since 1922. He was graduated from Miami Medical College, Cincinnati.

Doctor Gray was a Life Member of the O.S.M.A. and had received a Fifty Year Pin.

Survivors include his widow, a daughter, three sons, one sister and two grandchildren.

J. W. Francisco, M.D.
1862-1955

J. W. Francisco, M.D., Enid, died February 28 in an Enid hospital after an illness of several months.

He was born in Cumberland Gap, Tenn. and was graduated from the University of Tennessee medical school. He practiced in Tennessee and Kentucky before coming to Oklahoma in 1901. He was a member of the First Baptist church, Lions club and Masonic Lodge.

He was preceded in death by his son, Glenn Francisco, M.D. in May of 1954. His widow, four daughters, another son, six grandchildren and one great-grandchild survive.

J. E. WALLACE, M.D.
1880-1955

J. E. Wallace, M.D., Tulsa physician for 48 years, died March 19 in a Tulsa hospital. He had been ill for seven months.

Doctor Wallace was a native of Maryville, Tenn., and studied medicine at the University of Tennessee. He came to Tulsa from Guthrie after first coming to Oklahoma in 1900.

Doctor Wallace served during the Spanish-American War and received a decoration from the president of Cuba.

He was in a number of organizations and was a member of the Masonic Lodge, Knights of Pythias and Veterans of Foreign Wars. Doctor Wallace was in active practice at the time of his death.

Survivors include the widow of the home, one daughter and three granddaughters.

ANNOUNCEMENTS

Oklahoma State Medical Association

May 9-10-11, Tulsa, Oklahoma. House of Delegates Sunday, May 8.

American Medical Association

Atlantic City, New Jersey. June 6-10.

American Proctologic Society

Hotel Statler, New York City, June 1-4, 1955.

American Board of Obstetrics and Gynecology

Next scheduled examinations (Part II) will be conducted at the Edgewater Beach Hotel, Chicago, May 11-20, 1955.

United States Public Health Service

Competitive examination for appointment as medical officers to the regular corps of the USPHS will be held June 7, 8, 9, 1955. Application forms may be obtained from the Chief, Division of Personnel, Public Health Service, Department of Health, Education and Welfare, Washington 25, D.C.

American College of Chest Physicians

Ambassador Hotel, Atlantic City, New Jersey, June 1-5, 1955. Programs may be obtained from the Executive Offices, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Ill.

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

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Brown, H. W.: J. Pediat. 45:419, 1954.

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Have You Heard?

GEORGE H. KIMBALL, M.D., Oklahoma City, was elected to active membership in the American Society of Plastic and Reconstructive Surgeons recently.

GEORGE BROWN, M.D., McAlester, spoke on "Surgical Management of Segmental Diverticulitis" at the International Academy of Proctology in New York City the latter part of March.

WAYNE A. STARKEY, M.D., Altus, represented Oklahoma at a Blue Shield Commission meeting in Chicago.

EVERETT S. LAIN, M.D., Oklahoma City, spoke on recent advances in research and treatment of cancer at Hammon recently.

DIVONIS WORTEN, M.D., retired Pawhuska physician, has contributed $47,000 to Oklahoma Baptist University for improvement of athletic facilities.

JAMES H. HOLMAN, M.D. has moved from Tipton to Altus.

NORMAN GISSLER, M.D. has discontinued his practice in Okemah.

ELI ABRAMSON, M.D., formerly of New York, has opened his office in McAlester.

ROBERT MAYFIELD, M.D., Norman, addressed the maternity class for expectant mothers of Cleveland county.

H. B. JENKINS, M.D., who has been serving with the navy, has opened his office in Chandler.

HENRY H. TURNER, M.D., Oklahoma City, spoke on "Radioactive Isotopes in Medicine" at an O.U. pharmaceutical chemistry class lecture.

H. C. WHEELER, M.D., McAlester, has been accepted as a member of the American Society of Anesthesiologists.

CARL HALLFORD, M.D., Boise City, has been called to active duty with the U. S. Army. He reported to Fort Sam Houston, San Antonio, Texas.

JOHN W. GALLAGHER, M.D., has moved from Shawnee to Piqua, Ohio.

J. W. RENTFROW, M.D., Bristow, has left for Boston where he was granted a fellowship at the Lahey Clinic.

ETHEL M. WALKER, M.D., Ardmore, has been appointed civilian consultant in obstetrics and gynecology at the Ardmore Air Force Base Hospital.

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Blackwell Hospital Opened

The new Blackwell General Hospital, operated by the Felician sisters, has been opened.

Constructed and equipped at a cost of $1,250,000.00, the four story building was erected on a 10 acre site. Approximately $225,000 was donated by citizens of the area, $435,000.00 was contributed by the Oklahoma State Department of Health administering federal funds under the Hill-Burton act, and the remainder was financed by the Felician order.

Although the hospital is designed for 60 beds, service facilities are provided for 100 patients. The service wing is a one story unit, forming the stem of a "T" plan with the main four story hospital units.

The building is completely air conditioned, has its own water softener, emergency lighting system, oxygen piped to individual rooms and other modern features contributing to patient service and safety.

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July 11-16, 1955
CLINICAL HEMATOLOGY (Registration Limited)

July 14-16, 1955
DERMATOLOGY FOR GENERAL PRACTITIONERS

July 25-28, 1955
POSTGRADUATE SEMINAR IN OPHTHALMOLOGY

September 26-30, 1955
EIGHTH ANNUAL SYMPOSIUM OF PULMONARY DISEASES (Fitzsimons Army Hospital)

October 10-12, 1955
CLINICAL ELECTROCARDIOGRAPHY

October 13-15, 1955
FOURTH WESTERN CARDIOLOGY CONFERENCE

October 20-22, 1955
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Editorials

Resistance to Antibiotics

The changing pattern of susceptibility of various microorganisms to all the antibiotics has been studied extensively. The increasing number of strains of Staphylococci that are resistant to penicillin has been well authenticated. Maxwell Finland[1] reporting on his studies in vitro of strains of bacteria isolated at the Boston City Hospital was unable to find any important change in resistance to any of the antibiotics tested for the pneumococcus, group A hemolytic streptococcus, meningococcus, gonococcus, H. influenza and proteus. Among the strains of Staphylococcus aureus isolated from patients, resistance to penicillin appears to be completely correlated with the ability of the strains to produce penicillinase. Most of the important changes that have been noted, however, appear to be directly correlated with the extensive use of the particular agent or agents involved. In a more or less side comment, he avers that striking changes in resistance of the Staphylococcus to erythromycin have been avoided in that hospital by the use of erythromycin only in combination with other effective agents. It appears that effective combinations of antibiotics will have to be pointed out to the clinician, much as has been done in the case of infections due to the tubercle bacillus where resistance to streptomycin is reduced by the simultaneous use of para amino salicylic acid.

Concerning Medical Missionaries

Two letters from R. J. Garst, M.D., Professor of Orthopedics at Christian Medical College in India, have come across the editor's desk. The fact that Doctor Garst graduated from and received his formal training at the University of Oklahoma and its affiliated hospitals and the fact that his wife was killed in a jeep accident on the way to the port of embarkation have no bearing on this piece except that the letters might not otherwise have been read. They are from Garst and his two children to the friends who are sustaining the college.

". . . Then the children, our cook and his two daughters (his wife is dead) and I took a patient with a broken back and paralysis to his home in a village 30 miles away. The poor fellow had been so despondent because of his condition and worrying about his family and farm that I couldn't help but take pity on him. Most of these villages aren't very accessible and the roads made by bullock carts aren't highways. But we made it. One place, I nearly slipped into a pond and several times nearly got stuck where some farmer had decided to run his irrigation ditches across the road.

"The family was certainly grateful to us. They fixed us boiled eggs and tea, then gave us a big armload of sugar cane (David loves to chew it), an armload of cotton just pulled (I gave it to the hospital hoping they could find some use for it) and a basket of fruit.

"Christmas night we had dinner with Dr. Fred Scovel (a Presbyterian missionary who had been in China and is now our hospital superintendent) and his family. We went up to Jullundur City and spent three days with friends at the United Christian Schools. It is a high school and trade school, a joint effort of the Methodists and American Presbyterians. They are really doing well in agriculture.

"Four years ago they started trying to grow wheat on what was pure sand. Each year they have increased their production. Last year they got 20 bushels to the acre and this year they have fertilized and the wheat looks wonderful. They have tractors but no combines. Threshing is done by hand. If anyone wants to send a combine, it would be greatly appreciated . . .

"Some have asked about scholarships. Two hundred dollars a year will furnish tuition and living expenses for a medical student in the Christian Medical College, while a boy in high school (trade school) at Jullundur

can be supported and educated on fifty dollars a year . . .

"Although I haven't seen our own Methodist missions in operation I have seen fine missions which are built on a foreigner's work without developing Indian leaders to take over. When and if these men have to leave, their mission will fold up. I hope that we are not guilty of this.

"We are going to be in need of a general surgeon who has had some teaching experience to head our department of surgery in another year. I am afraid it is going to be difficult to find someone with the necessary qualifications. You folks not only pray about this but keep on the lookout for someone who would be willing to come for a few years—someone like Doctor Ormund, who headed the department of urology at Henry Ford Hospital for 25 years and was there 10 years before that. When he had to retire three years ago, he came out here and has been teaching missionary doctors all over India to do better urology. He is 70 and enjoys the work; his wife goes with him on most of his trips. This kind of person would be ideal for our surgical department.

"Keep the India missionaries in your prayers. Praying that they will make every minute count in training Indian Christians to take over the many aspects of the Christian work. I feel that our mission work is doing a great deal in keeping India from going communist. We hope that it isn't interrupted too soon."

From reading these few thoughts one gets some inkling of the motivation of the medical missionary. He is concerned very personally in the problem of helping the Indian to help himself. He asks for things to make his mission successful. He is concerned that the Indian accept the Christian Faith as his own and carry on the work of helping his people. How important is this? I do not know but I strongly suspect that if he is to think as we do in matters pertaining to the right and the dignity and the freedom of the human being, it is nearly a must. It is a paradox that our constitution will not permit us to directly foster what well may be our strongest weapon against communism."

A Diamond Anniversary

In small print, on the Table of Contents page of Parke Davis and Company's THERAPEUTIC NOTES there appears the following sentence: "Therapeutic Notes is a medical journal edited, published and distributed as a continuous service to the medical profession since 1894."

Few American medical periodicals can boast of such a long period of continuous publication. Probably none can compare with THERAPEUTIC NOTES six editions printed in English, Spanish, French and Portuguese, and distributed to almost 500,000 physicians around the globe!

The JOURNAL is pleased to congratulate THERAPEUTIC NOTES, ably edited by Dr. William A. Murray, and wishes it 60 more years of continued success in transmitting important medical news to the physicians of the world "n'a pas de patrie."

Proceedings of the House of Delegates of the Annual Meeting will appear in the July issue.

Scientific Articles

Reporting OCCUPATIONAL DISEASE *in Oklahoma*

JEAN SPENCER FELTON, M.D.

THE AUTHOR

Jean Spencer Felton, M.D., Oklahoma City, is a graduate of Stanford University. He is associate professor of the department of preventive medicine and public health and the department of medicine, University of Oklahoma School of Medicine. Doctor Felton is also consultant to the Oklahoma State Department of Health in industrial hygiene.

Awareness of the need for greater action in recognizing and combatting occupational disease in Oklahoma was demonstrated in June 1953, when the 24th Legislature passed the Oklahoma Occupational Health Act. This bill, approved by the Governor, is the culmination of several years of thinking on the part of those interested in reducing the amount and severity of illness "arising out of and in the course of employment." Whereas Workmen's Compensation Laws covering occupationally incurred injuries have been in effect in Oklahoma for almost 40 years, the addition of this Act calls for comparable legislation in connection with the reporting of job-connected illnesses and compensation to those workers sustaining these illnesses.

The Bill (Senate Bill No. 60) reads in part as follows:

> "Section 2. (a) . . . the State Commissioner of Health is hereby authorized and directed to design and provide suitable forms for reporting occupational diseases and illness, provide appropriate instruction for their use, and to furnish them without charge to all licensed physicians. Such reports shall not be admissible in evidence in any court or in any proceedings before the Industrial Commission of the State of Oklahoma."

Report Forms

This, Doctor Grady F. Mathews, State Commissioner of Health has done, and in Fig. 1 is shown the front of the new form "Report of Occupational Disease," wherein information relating to the illness (Occupation, type of business, diagnosis, laboratory test results, etc.,) is to be provided by the reporting physician. Some of the details to be followed in the completion of the form are given on the lower portion of the blank. Perhaps the greatest help that can be given the State Health Department in this area of disease reporting is to provide as much information as possible, avoiding generalities particularly in diagnosis and in designation of the causative agent.

Attempts at tracing the epidemiology of an occupational disease can be fraught with difficulty because of the use in industry of raw or manufactured materials, the nature of which is not known, and the absence of any description of ingredients on labels. In many instances workmen have no idea of the nature of the hazardous materials with which they may be in contact. Any clue that can be provided may be the one illuminating factor that will shed light on the etiology of the process observed and reported. If it is known that the specific agent responsible for the illness is carbon tetrachloride, the term "carbon tetrachloride" should be used.

The act continues:

> "(b.) The State Board of Health shall designate by list or generally define those diseases or illnesses which should be reported and request all physicians of this state to cooperate in the reporting of such diseases."

Reportable Diseases

In compliance with this, the State Board of Health* at its meeting on September 13, 1953 chose to define generally the occupational diseases coming within the purview of the Act. The following categories of diseases were designated as reportable, and

*The following comprise the membership of the Board: President, Charles R. Rountree, M.D.; Vice-President, Otho R. Whiteneck, D.D.S.; secretary, Mr. R. L. Loy; T. H. McCarley, M.D.; A. G. Reed, D.O.; Arnold A. Sawallisch, B.S., Eng.; Charles Ed. White, M.D.; M. L Whitney, M.D.; and Gordon D. Williams, M.D.

these broad classifications appear on the reverse side of the form:

1. Occupational Diseases of the Skin

Examples: Contact dermatitis caused by primary irritants and sensitizers; oil acne; chrome ulcers; epitheliomatous cancer, etc.

2. Systemic Effects Due to Dusts, Fumes, Gases, or Chemical Agents.

Examples: Silicosis, asbestosis, or other pneumoconioses; poisioning by lead, mercury, cadmium, arsenic, or other metals. poisoning by carbon monoxide, chlorine, nitric oxides or other gases; poisoning by benzol, carbon tetrachloride, carbon disulfide, or other organic solvents; poisoning by insecticide sprays such as parathion, lead arsenate, etc.

3. Disorders Due to Physical Agents (Non-Traumatic)

Examples: Disease due to radiation; welders conjuctivitis; caisson disease; heat exhaustion; impaired hearing due to noise; tenosynovitis (non-traumatic), etc.

4. Infective and Parasitic Diseases (Excluding Secondary Infections Subsequent to Trauma)

Examples: Anthrax, brucellosis, Q Fever, Newcastle's Disease, tuberculosis, fungous diseases such as sporotrichosis, blastomycosis, etc.

By classifying the reportable diseases in this manner, the passage of amending legislation to cover them is obviated as new materials are produced that may prove to be health hazards and result in new occupational disease syndromes.

Essentially, as defined on the report form, *"an occupational disease is any abnormal physiological condition resulting from exposure to a specific industrial health hazard or hazards, other than traumatic injuries, arising out of and in the course of the patient's occupation."*

The State Commissioner of Health submitted the report form to the State Attorney General, and it was the opinion of that office that the form, instructions, and categories listed were "legally sufficient and will comply with the Oklahoma Occupational Health Act."

Letter to Physicians

In an effort to acquaint all physicians of the State with the contents of the Act, the following letter, with a single copy of the report form, was mailed recently:

Dear Doctor:

As an Oklahoma physician, we invite your attention to recent development in our state's industrial health program.

On June 8 of this year, Governor Murray approved a legislative act entitled "Oklahoma's Occupational Health Act." One provision of the act authorized the State Commissioner of Health to carry on a program designed to detect occupational health hazards and to work with industry in the prevention of conditions that cause such industrial disease. A second provision has to do with the reporting of occupational disease by physicians to the State Department of Health.

In accordance with still another provision of this act, the State Board of Health has approved the enclosed form for making such reports. The Board further requests the cooperation of each physician in reporting occupational disease. A receipt of reports of suspected or known cases of occupational illness will materially assist the State Department in the location of necessary preventive and educational measures. The information contained in these reports will be confidential, and the act itself specifies that information contained therein is not admissible as evidence in any court or in any compensation case before the Industrial Commission.

The reverse side of the report form sets forth the Board's action in defining occupational diseases. The occupational diseases are grouped into four categories, with examples in each category given.

Naturally, this Department is aware that in many areas of the state there are few industrial medical cases and that the practicing physician may encounter an occasional case involving unfamiliar industrial processes and chemicals such that a specific diagnosis may be difficult, especially so when the patients' occupation may not be called to the attention of the physician.

If uncertainty exists as to a given illness being occupational in origin, this Department offers consultation services of its Industrial Hygiene Unit. J. S. Felton, M.D. of the Department of Preventive Medicine

and Public Health, University of Oklahoma Medical School, is a consultant of this Department and is available to you on problems dealing with occupational illness. Further, the Department will insofar as possible inquire into any environment which you may think merits such action, as detrimental to the health of workers.

We enclose only one copy of this report form. We will furnish you with additional copies upon request. Reports are to be mailed to the State Commissioner of Health, Oklahoma State Department of Health, 3400 North Eastern Avenue, Oklahoma City, Oklahoma.

Your cooperation in this effort to prevent conditions leading to occupational illness or occupational health hazards among the workers of Oklahoma will be appreciated.

Sincerely yours,
S/G. F. MATHEWS, M.D.
Commissioner of Health

Further provisions of the act are:

"Section 3. The State Commissioner of Health is hereby authorized and empowered to utilize all available facilities, laboratory, equipment and personnel in a joint program with the State Commissioner of Labor, industrial and employee organizations to detect and prevent conditions leading to industrial diseases and occupational health hazards."

There has been within the structure of the State Health Department for a number of years, a Division of Industrial Hygiene, staffed by trained engineers. On request, surveys have been made of industrial establishments to identify situations and materials hazardous to workers. Laboratory analyses of samples of workroom air have been carried out in order to quantify the actual degree of exposure to the harmful material concerned.

Following study of the resultant data, the plant data, the plant layout, and such evidence as may be available from clinical examinations of workers, recommendations are made for control of the hazard.* These may include a new system of ventilation which will remove the dangerous fumes, gases, mists, vapors, or dusts; substitution of a new non-toxic material for the disease-producing substance; an improvement of plant housekeeping; isolation of the process productive of the harmful material; substitution of wet grinding or drilling methods for dry; or the use of personal protective devices (respirators, air supplied hoods, protective clothing, etc.) by the worker. In some instances re-engineering of a particular job may be indicated, and will turn a dangerous work area into a completely safe one.

As always, the Division of Industrial Hygiene will cooperate gladly with any agency or organization desirous of resolving an occupational health problem.

Value of the Act

One may wonder as to the need for such legislation. Primarily it is intended to give the State Department of Health information of the existence of occupational health hazards. It is not expected that the private physician will perform any of the medical sleuthing required for hazard detection, but with his report, the industrial health personnel of the State Department of Health will be able to identify the source of the hazard more intelligently and more quickly. In this manner, it is hoped, occurrences among other workers can be averted, and the industry concerned will become a safe place in which to work.

Other Pertinent Legislation

The 24th Legislature passed, and the Governor approved, another bill (House Bill No. 791), wherein certain sections of the existing Workmen's Compensation Law were amended. In the subsection involved, the definition of injury or personal injury was enlarged to read as follows:

"Injury or personal injury means only accidental injuries arising out of and in the course of employment and such disease or infection as may naturally result therefrom and *occupational disease* arising out of and in the course of employment as herein defined." (Italics are the writer's.)

Therefore, occupational diseases, in addition to becoming *reportable* have also been declared *compensable*, and in a subsequent amendment some 40 conditions are "deemed to be" occupational diseases. Nearly all of

*Recently the services of a medical consultant have been added to the Division, and now the clinical features of an industrial health situation can be reviewed also, thus providing a total service.

REPORT OF OCCUPATIONAL DISEASE
(See reverse side)

OCCUPATIONAL HISTORY	Name of patient		Sex	Age
	Address	Town		
	Occupation	Actual work done		
	Name of employer	Address	Town	
	Type of business (work done or goods made)			
MEDICAL REPORT	Diagnosis	Date of onset		
	Cause (what in your opinion caused this condition)			
	Additional facts (tests, x-ray, previous or complicating illness)	Duration Actual: Estimated:		

Do you need additional copies of this form
Yes _____ No _____

Date of this report _____, 19 ____

Signed _____, Phy.
Address _____

Please mail to Oklahoma State Department of Health, 3400 North Eastern, Oklahoma City, Oklahoma

INSTRUCTIONS FOR MAKING REPORT

GENERAL. Report of an occupational disease should be mailed to the State Department of Health within 10 days of knowledge of its occurrence. Please write plainly and with ink. Every item of information should be carefully supplied.

OCCUPATIONAL HISTORY. Under "occupation" and "actual work done", enter in as precise and specific manner as possible the worker's occupation at the time the illness was sustained, or which allegedly caused the illness, and a brief description of the actual work he was engaged in. Avoid the use of general terms such as "laborer" without specifying the actual work he was doing or business. If it is definitely known that the present occupation is not the one causing the illness, this fact and other details should be noted under "additional facts". Under "type of business", specify the kind of industry or kind of business the employer is engaged in, such as products manufactured (cotton textiles, printing, refinery, etc.), or kind of service given or engaged in (laundry, restaurant, garage, etc.).

MEDICAL REPORT. State the diagnosis and the cause of the illness, or what, in your opinion, caused the illness, as precisely and as accurately as you can. For instance, do not write in only "solvent poisoning", if you know that the specific solvent causing the illness was carbon tetrachloride. Use the space "additional facts" for noting other facts about the case, such as laboratory and x-ray findings, complicating diseases, recurring attacks, termination in death, etc.

This report form is furnished in accordance with the provisions of the Oklahoma Occupational Health Act (Senate Bill No. 60), which became effective June 6, 1953. The law provides that all physicians of this state cooperate in the reporting of occupational diseases. Reports made in accordance with this law "shall not be admissible in evidence in any court or in any proceedings before the Industrial Commission of the State of Oklahoma".

FIG. 1

the conditions defined in broad classifications above have been included for individual listing in this amendment.

Both the Oklahoma Occupational Health Act and the Act providing occupational disease coverage under the Workmen's Compensation Law were passed under emergency status.

Oklahoma has joined the long list of those states recognizing the existence of occupational diseases and the need for reporting them so that there can be better identification, control, and prevention. Through compensation coverage the worker will be protected.

As the legislators have exhibited an understanding of health needs, may the practitioners parallel their discernment by early and detailed reporting of those occupational illnesses presented by their patients.

The State Commissioner of Health solicits the cooperation of Oklahoma's medical body.

Serpasil--Its Use As A SEDATIVE *in Certain Disturbed* MENTAL PATIENTS

JOSEPH SHAPIRO, M.D.

A recent article by Kline[1] on the effectiveness of Rauwolfia and Serpentina and one of its alkaloids, Reserpine, as a sedative in neuropsychiatric conditions prompted my investigation of the usefulness of this drug as a sedative for chronically disturbed mental patients. Kline's findings suggested that this drug might prove an effective sedative agent without the undesirable hypnotic and drug-like effects of the more commonly used barbiturates. My experimental design and objectives were modest, principally because of the limited number of personnel to assist in carrying out the project. Efforts were directed mainly towards evaluating the sedative effect of Serpasil (Reserpine). Only secondary consideration was given to its effect on blood pressures, pulse and circulating blood elements.

This paper does not propose to review the literature on this new drug. Kline made such review in his article. However, a brief statement of the mode of action of the drug and some of its side effects is appropriate.

Reserpine (Serpasil) is one of the about 14 alkaloids[2] isolated from the crude root of Rauwolfia Serpentina Bentham, a small plant found in India, Burma and Malay Peninsula.

In 1952 Reserpine was isolated from the crude root[3] and shown to have central depressant as well as hypotensive effects. The effect of the drug is a state of sedation and quietude. This effect is obtained whether the drug is administered orally or parenterally. I have confirmed the observations by previous workers that a latency period of one and one-half to two hours elapses after the administration before the effect of the drug becomes apparent. The depth of sedation and quietude varies with the dosage and individual responsiveness. For example, several patients receiving 2 mg. of Serpasil daily were in a light somnolent state, while others on a similar dose merely sat very quietly in the chairs all day. Patients under the effect of Serpasil could be aroused readily and did not give the appearance of being drugged, such as is common in conjunction with barbiturates and chloral hydrate. Recent pharmacological studies[4] suggest that the drug exerts its influences at the hypothalamic level by partially supressing sympathetic predominance.

Other actions of the drug are its hypotensive and bradycrotic effects. Some of the side effects of the drug have been reported as nasal stuffiness, diarrhea and dizziness.

THE AUTHOR

Joseph Shapiro, M.D., Fort Supply, graduated from the University of Maryland. He is clinical director of Western State Hospital.

Subjects

The subjects were a group of 64 disturbed women residing on the chronic ward. Here were kept disturbed and hyperactive mental defectives and chronic, deteriorated hyperactive schizophrenics. The patients in the group varied in age from 19 to 75 years, the average being 46 years. They had been hospitalized as little as one to as long as 46 years, the average being 18.7 years. These patients fell into the following diagnostic categories as recorded from their diagnoses on admission:

Mental Deficiency (all levels)	31	
Psychosis with Mental Deficiency	3	
Mental Deficiency with Convulsive Disorder	3	
Epileptic Deterioration	1	38
Schizophrenia		
(Hebephrenic	8)	
(Paranoid	6)	
(Catatonic	10)	
(Chronic Undifferentiated	2)	26
Total		64

For most of the waking day, the majority of these patients were in fairly constant motion, walking, running and gesticulating aimlessly. Assaultive, destructive behavior was common on the ward. Other descriptive terms commonly applied to the behavior of these patients were resistive, combative, untidy, excited, overactive, disoriented, noisy, withdrawn, irritable and quarrelsome, and given to soiling. It was necessary to restrain and seclude many patients much of the time. Barbiturates and chloral hydrate had been the sedatives in use before this investigation.

Procedure

All previous medications were cancelled. Serpasil was the only drug used for one calendar month (31 days).

The number of restraints and seclusions necessary for the month immediately preceding the beginning of the experiment was computed from hospital records. Pre-treatment blood pressure, urinalysis and routine blood counts were taken on all patients. Blood pressure, urinalysis, and blood counts were repeated after the second week of medication and immediately after the experiment was terminated. Pulse rates were recorded each morning and night on all patients during the experimental period.

All the patients in the group on the ward received one-half ampule (2.5 mg.) of Serpasil intramuscularly on two successive mornings. Beginning with the third day, each patient received one tablet (1 mgm.) twice daily for the balance of the month. (The total duration of the investigation was 31 days.) At the end of the investigative period, a count of the number of restraints and seclusions was made and compared with a similar count for the month preceding the test period. In addition, a rating scale of patients' behavior identical to the one used in Kline's study was submitted to each of the ward attendants for evaluating of the patients' behavior on the ward. A copy of this rating scale follows:

Rating Scale

Compared to the month of June, 1954, how would you describe the behavior of the patients on this ward during te month of July, 1954 (check one)

_____Much better
_____Slightly better
_____About the same
_____Slightly worse
_____Much worse

Was this true of (check one)

_____All the patients
_____Most of the patients
_____About one-half of the patients
_____A few of the patients

Observations and Results

In the month before the experiment, 18 patients required restraints and/or seclusion. There were 146 seclusions and 208 restraints recorded. In the experimental period 16 patients required 79 seclusions and 148 restraints. This finding indicates that 84.8 per cent more seclusions and 40 per cent more restraints were required in the pretest period as compared to the test period. Within 48 hours after the first dose was administered a profound change took place in the general atmosphere on the ward and in the demeanor of the whole group. The ward, as one of the attendants described it, became "uncomfortably quiet." Patients sat around quietly in their chairs or lay on the floor. There was a noticeable absence of increased activity which had characterized the group behavior in the past. The attendants appeared "somewhat pleasantly bewildered" at the change in the ward behavior. For the first time in the years they had worked on this ward, the morning shift attendants were able to congregate at one time in the nursing station for mid-morning "coffee break." This constituted an unheard of luxury for the attendants. Overactive behavior reappeared in some of the more disturbed patients, but it was more manageable now than in the pretest period. Restraints and seclusions were for shorter periods of time. In general, the patients were more pleasant and exhibited efforts at more socially accepted behavior. They began to greet attendants and physicians at morning rounds with a smile and at times responded appropriately to the cheery, "Good Morning."

Ten attendants working on this ward answered the Rating Scale of patients' be-

havior. All the attendants reported that the behavior in the ward was "much better" during the experimental period than prior to it. They also agreed unanimously that improved behavior was present in "most of the patients."

Although most of the patients showed a slowing of the pulse, only four patients in this series developed bradycardia (pulse rate below 60 a minute). This figure was an incidence of only six per cent of our series. These four patients responded to reduced doses of Serpasil plus the administration of atropine gr. 1/100 subcutaneously. None of these four patients required more than two doses of atropine.

Although no detailed studies of hypotensive action of Serpasil was intended in this investigation, I did note a gradual but moderate lowering of blood pressure in most of the patients. The diastolic pressure was influenced to greater degree than the systolic pressure. There were no incidences of diarrhea or skin sensitivity reactions in this series. No significant changes were found in the urinalysis or in blood counts of the experimental group.

Two patients in this group died, both within the first eight days of the investigation. The first patient was a 73 year old woman with hebephrenic schizophrenia who died suddenly from what appeared to be a cerebrovascular accident at the end of the first week of the investigation. The other patient, a 50 year old mental defective woman, died of what appeared to have been acute coronary occlusion. This patient's blood pressure, recorded the day before, was 182/92. There were no evidences in either patient's total response to this week of treatment which suggested any probable relationship of Serpasil to the cause of death. Unfortunately, I was unable to obtain an autopsy in either patient. One patient in the group was discovered to be diabetic. The Serpasil was continued throughout the experimental period and seemingly had no influence on her response to diabetic management, consisting of U. 15 insulin TID plus appropriate dietary restrictions. One schizophrenic paranoid woman, ill with this disease for more than 15 years, had a temporary period of mental clarity free from psychotic symptoms lasting over 10 days. This favorable change continued after the experiment terminated. This patient is still receiving Serpasil and is maintaining her improvement.

Summary and Conclusion

1. In a series of 64 disturbed mental defectives and deteriorated schizophrenic women, Serpasil was found to be an effective sedative drug. This drug offered the advantage of the absence of the hypnotic and "hang-over" effect commonly associated with barbiturates and chloral hydrate.

2. Although bradycardia occurred in a small percentage of patients with maintenance doses of 1-2 mgm. daily, it was readily correctable with modification of dosage and the occasional use of atropine gr. 1/100. This finding would suggest that Serpasil in the dosage used in this study has a fairly wide margin of safety.

3. The favorable response of a chronic schizophrenic patient in this group suggests that Serpasil may have some influence on the course and progress of schizophrenic disease.

4. In the dosage schedule used in this study and for the period of 31 days, Serpasil did not appear to have any deleterious influence on the urinary tract or on the blood forming elements.

5. The sedative effect of Serpasil combined with its hypotensive properties suggests the use of this drug in geriatric psychiatric cases. Further clinical evaluation in this area is indicated.

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Case Reports

LEIOMYOSARCOMA *of the* STOMACH

E. EUGENE RICE, M.D.

Sarcomas of the stomach comprise only about two per cent of the malignant lesions of the stomach; but they deserve attention because they tend to appear in young persons, may cause severe hemorrhage and become rather large. They are amenable to surgical treatment. Leiomyosarcomas comprise about 25 per cent of the sarcomas of the stomach.

Giberson, Dockerty and Gray[1] have extensively reviewed the literature and have analyzed 40 cases occurring at the Mayo Clinic between 1907 and 1950. Since leiomyosarcoma of the stomach is relatively rare, only 135 cases had been reported when Giberson and colleagues made their study, the report of another case seems justified.

The condition is distributed almost equally between the sexes, although in slightly more men than women. While it appears in persons aged from 10 to 73, most cases occur in persons between 40 and 59 and the average age of the patients is 45.7. Most carcinomas, in contrast to the leiomyosarcomas, occur in the later ages.

The symptoms depend on the size of the tumor, the area of the stomach involved, the rate and direction of growth, and whether or not the mucosa is ulcerous. If ulceration occurs, the bleeding is the most prominent symptom. The bleeding occurs as melaena or hematemesis and anemia develops as a result.

Pain is not a prominent symptom. Vague and variable, it is associated with indigestion, which may yield for a time to ulcer regime.

A slow growing mass in the upper abdomen is the earliest and most persistent finding. This mass is usually not tender or movable.

The most valuable aid to diagnosis is the roentgenogram, which reveals an extragastric filling defect, usually not involving the pylorus. A sinus may be demonstrated extending into the tumor. The mass often appears to be operable.

THE AUTHOR

E. Eugene Rice, M.D., Shawnee, is a member of the Journal Editorial Board and formerly editor of the Pottawatomie County Bulletin. He is a graduate of Northwestern University and also received postgraduate training at the University of Edinburgh, University of London and University of Vienna. He is a Fellow of the American College of Surgeons.

Gastroscopy may be beneficial in diagnosis. It will demonstrate a mass protruding into the stomach. Biopsy may reveal a leiomyosarcoma.

Differential diagnosis is important. Gastric carcinoma, lymphosarcoma, polypoid lesions, benign leiomyoma and sarcomas are the usual tumors resembling leiomyosarcoma. Lymphosarcomas are radio-sensitive and also present large tumors that are operable. Carcinoma of the stomach usually pursues a far more rapid course than leiomyosarcoma; its mass is smaller and fixed, its gastric symptoms are more pronounced, its bleeding less evident; and the patient is usually cachetic. It is extremely difficult to differentiate clinically the polypoid lesions and benign leiomyosarcomas and the diagnosis is based chiefly on the fact that the malignant lesions undergo ulceration and degenerative changes and form fistulous tracts.

Leiomyosarcoma of the stomach spreads slowly. The liver is the most common site of metastases then the peritoneum. The lymph nodes are involved only by direct extension. Metastases occur in 15 to 20 per cent of cases.

Surgical intervention is the best method of treatment; and surgical removal of the involved portion of the stomach even in the

presence of metastases, offers hope of recovery. Roentgen rays, radium or nitrogen mustard do not alter the course of the disease.

The pathologic features vary greatly in gross appearance but all have lobulated nodules with an average size of 9 x 8 x 6 cm. Degenerative changes are common, the ordinary ones being necrosis, cystic changes, hemorrhages and ulceration. The site of the tumor is often in the midportion of the stomach, either anteriorly or posteriorly.

Microscopically, the cells are typically spindle-shaped like those of smooth muscle and have moderate amounts of cytoplasm, oval nuclei near their center. Giant cells are found in the degenerative areas where there is a variation of the arrangements of the cells and presence of mitotic figures.

Presentation of Case

A white woman, age 61, was first seen on October 1, 1953. Her only complaint was an increasing enlargement of the upper left part of her abdomen. She had first noticed it about six months earlier when her clothing became tighter although her weight had not changed.

She had felt a sense of fullness but no pain; there had been no indigestion, no nausea or vomiting, no hematemesis, no tarry stools. Her bowel habits were practically unchanged except for slight constipation.

She had a vaginal hysterectomy and repair three years earlier; otherwise her medical history was normal.

Physical Examination: The patient weighed 180 pounds, her normal weight. On general physical examination the patient's head and neck, the heart and lungs and the rest of the body, apart from the abdomen, appeared to be essentially normal. The blood pressure was 155/80, and the temperature, pulse and respirations were normal.

The left side of the abdomen was completely filled with a large mass, measuring approximately 18 x 20 cm. and extending from the costal margin to the crest of the ilium and across the midline. It was moderately movable without too definite an outline and was not tender. The spleen, kidneys and liver were not palpable.

Laboratory: The urinalysis was normal, and the blood serology was negative. The RBC was 3,540,000, the WBC 5,500; the hemoglobin was 12 gms., with a differential of eosinophiles of three per cent, myelocytes one per cent, juveniles two per cent, stabs. eight per cent, segs. 46 per cent and lymphocytes 38 per cent.

Roentgenograms: Serial films of the gastrointestinal tract revealed a soft tissue mass (Fig. 1) which filled the left side of the abdomen and which on the film measured 19 x 17 cm. and which appeared to involve the distal half of the greater curvature of the stomach with a ragged appearance of the gastric side of the mass and with no apparent filling sinus formation. The pylorus was not involved.

A barium enema revealed a pressure defect on the upper portion of the descending colon and on the left half of the transverse colon so that the splenic flexure was lowered from its normal position (Fig. 2).

Intravenous pyelograms revealed normal position of the kidneys and normal filling of the pelves.

On October 12, 1953, an operation was performed through an upper left rectus incision and a tumor involving the lower half of the greater curvature of the stomach was found. The tumor consisted of a partly solid and partly cystic mass and it apparently originated from the muscularis of the stomach. Many adhesions to the surrounding tissues were found as was a moderate amount of serous fluid in the peritoneal cavity.

No metastatic nodules were palpated in the liver, and there was no involvement of the regional lymph glands.

A partial gastrectomy was done with removal of the tumor and tissue on each side.

Pathologic Report: The gross specimen consisted of a segment of the stomach which measured 10 x 7 cm. and to which was attached a large cystic mass measuring 15 x 13 x 5 cm. The cyst is multiloculated and had a smooth lining. The cystic structures contain bloody fluid. One small nodule on the surface has a tough wall, and the center is filled with necrotic material. Over the great part of the surface of the stomach the cyst lining is intimately attached to the muscle wall.

Microscopic sections show a cystic lesion from the stomach containing mucous membrane and a tumor apparently arising from the smooth muscle. The tumor consists of elongated cells. In places the tumor appears to be vasculated; in others it appears to consist of compact spindle cells. In some of the sections the areas are quite cellular. The portions containing blood on gross examination are lined with endothelial cells. The blood vessels do not appear to be taking part in the tumor formation. There is necrosis. Areas of recent hemorrhage are present. In one of the sections there is a larger hyalinized area which surrounds some calcified material. Van Gieson stain reveals principally cells probably from smooth muscle.

Diagnosis: Lieomyosarcoma low grade.

Progress: One year after operation the patient has fully regained her weight and strength. She has normal blood counts and is in apparent good health.

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CRYPTOCOCCOSIS (*Torula*)

D. W. McCAULEY, M.D.

The infection is caused by a growth of organisms which form a pasty, yeastlike growth with absence of mycelia and endospores and often mistaken in spinal fluid for lymphocytes. The mode of transmission is unknown and only about 100 cases have been reported in the United States. The lesion may be confined to the central nervous system producing a clinical picture resembling that of meningitis or brain tumor.

R. W., a white male, age 39, consulted the author because of a frontal headache of about one month's duration. He stated he had consulted his local doctor who made a diagnosis of sinusitis and treated him for this. Three weeks after the onset a large warty like growth appeared on the right cheek. Because of this he consulted a dermatologist who made a diagnosis of carcinoma on clinical grounds and treated it on the same day with x-ray. At this same time he consulted an EENT specialist for the headache and was fitted with glasses. The headaches persisted so about a month from the onset he came to our clinic where he had been a patient two years previously for a hernia.

At this time the only complaint was a severe, persistent frontal headache and occasional nausea. This man had lived in Oklahoma for the last two and one-half years, and the two previous years in South America.

THE AUTHOR

D. W. McCauley, M.D., Okmulgee, is a University of Oklahoma School of Medicine graduate. He interned at the University of Colorado and served a residency at E.O.S.S., Talihina. Doctor McCauley is certified by the American College of Chest Physicians.

Physical examination at this time revealed a well developed, well nourished white male who appeared to be in extreme pain. T. 101.4°, P. 94, R. 22. There was tenderness over both eyeballs. Funduscopic examination revealed slight papilledema of the nasal portion of the left optic nerve. Heart, lungs, blood pressure and nervous system were all normal. X-ray of sinuses revealed cloudiness of both ethmoids. Urine normal throughout. RBC-5,220,000, Hb-90, WBC-14,300, Sed-85, Lymph-11, M-4.

The patient was admitted to the hospital for observation and started on penicillin areosol. Two days later another neurological examination revealed more papilledema and slight stiffness of the neck. The spinal fluid revealed 943 WBC, a positive Pandy and a dextrose of 43 mg. The next morning Dr.

(Continued on Page 183)

Cross section of active duodenal ulcer.

Dramatic Remission of Ulcer Pain

Pain of ulcer is associated with hypermotility; the pain is relieved when abnormal motility is controlled by Pro-Banthīne.

"In studying[1] the mechanism of ulcer pain, it is obvious that there are at least two factors which must be considered: namely, hydrochloric acid and motility.

". . . our studies indicate that ulcer pain in the uncomplicated case is invariably associated with abnormal motility. . . .

"Prompt relief of ulcer pain by ganglionic blocking agents . . . coincided exactly with cessation of abnormal motility and relaxation of the stomach."

Pro-Banthine Bromide (β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is a new, improved, well tolerated anticholinergic agent which consistently reduces hypermotility of the stomach and intestinal tract. In peptic ulcer therapy[2] Pro-Banthine has brought about dramatic remissions, based on roentgenologic evidence. Concurrently there is a reduction of pain, or in many instances, the pain and discomfort disappear early in the program of therapy.

One of the typical cases cited by the authors[2] is that of a male patient who refused surgery despite the presence of a huge crater in the duodenal bulb.

"This ulcer crater was unusually large, yet on 30 mg. doses of Pro-Banthine [q.i.d.] his symptoms were relieved in 48 hours and a most dramatic diminution in the size of the crater was evident within 12 days."

Pro-Banthine is proving equally effective in the relief of hypermotility of the large and small bowel, certain forms of pylorospasm, pancreatitis and ureteral and bladder spasm. G. D. Searle & Co., Research in the Service of Medicine.

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SEARLE

Association Activities

PRESIDENT'S LETTER

That the Oklahoma State Medical Association meeting in Tulsa May 8-11 inclusive was a complete success no one who attended can question. This success was due directly to many contributing groups, some of which are: Tulsa County Medical Society, the physicians of 74 of the 77 counties of Oklahoma, The Women's Auxiliary of the Oklahoma State Medical Association and the General Program Committee; indirectly but none the less important, the host City, the press, hotel management, et al.

The Tulsa County physicians as usual put their best foot forward,—and it may well be said that it is quite a neat and graceful foot. The precision of convention operation, the efficient committee functioning, the spirit of "You are our guests" as graciously shown by the host physicians and many other obviously well planned niceties have made this convention second to none that have preceded.

The physicians of 74 counties of Oklahoma showed in the writer's opinion the greatest interest in the entire program that probably has ever been at a State Meeting. This was particularly obvious in the main meeting room where at times standing room was quite well taken. This portends a wholesome advance in medical interest and knowledge and a guarantee to the public for better care, commensurate to the advances in medical science.

The Woman's Auxiliary to the Oklahoma State Medical Association was by no means idle at any time during the convention. This organization by its constitution has as its purpose, quote "To extend the aims of the medical profession." This organization is working faithfully and diligently to fulfill its purpose. Certainly it can be a powerful factor for the good of the profession if we the recipients only do our duty.

The program committee is to be commended for the quality and diversity of program offered the physicians of Oklahoma. The attendance at the individual lectures attest to the practical application of these.

It is heartening to see the growing interest in the profession and the spirit of service that obtains. To keep this growth uninhibted is ever our aim.

R. Q. Goodwin

President

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YOU don't have to be handicapped by under-powered, inflexible x-ray apparatus. General Electric not only gives you the Maxicon ASC — *a full-length table of rigid construction* — but also offers you all this for complete fluoroscopic and radiographic facilities: a new simplified 200-ma control unit . . . a new lightweight rotating-anode tube . . . a new full-wave x-ray transformer

That $4900 price includes, in addition, electronic timing, 1/20 to 10 seconds . . . 8:1 Bucky diaphragm . . . and fluoroscopic screen. At extra cost — motor-drive table angulation, spot-film device and 16:1 Bucky diaphragm.

Now's the time to step up your radiographic facilities. And, remember, you can get the Maxicon ASC — without initial capital investment—on the G-E Maxiservice® rental plan. For full information, see your G-E x-ray representative. Or, if you prefer, write X-Ray Department, General Electric Company, Milwaukee 1, Wisconsin. Ask for Pub. AM31.

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John Hart Accepts Chicago Position

John K. Hart

John K. Hart, formerly Associate Executive Secretary of the Oklahoma State Medical Association and Associate Business Manager of the *Journal*, has accepted a position in Chicago as Executive Secretary of the American Academy of Orthopaedic Surgeons.

Mr. Hart, who was with the Association seven years, assumed his duties in Chicago this month. A graduate of the University of Oklahoma School of Law, he was with the State Veterans Department before joining the Association.

Fraternity Initiates

Alpha Omega Alpha, honorary medical fraternity initiated 17 candidates into membership on April 19. Faculty members initiated include: Dr. George H. Garrison, Clinical Professor of Pediatrics; Dr. William K. Ishmael, Assistant Professor of Medicine; Dr. Wilbur F. Keller, Clinical Professor of Pathology: Dr. John H. Lamb, Clinical Professor of Dermatology and Syphilology; Dr. Wann Langston, Professor Emeritus of Medicine, and Dr. Charles M. O'Leary, Associate Professor of Surgery.

Fourth-year medical students to be initiated are: Albert M. Arky. Tulsa; Loren V. Baker, Jr., Elk City; William G. Blanchard, Tulsa; William E. Hall, Duncan; Samuel C. Jack, Duncan, Royce C. McDougal, Sapulpa; Richard A. Marshall, Davidson; Louis G. Neurenberger, Verden, and Bobby G. Smith, Seminole.

Two third-year students to be initiated are: Floyd F. Miller, Skiatook, and William R. Smith, Guymon.

Book Review

DRUGS IN CURRENT USE. Edited by: Walter Modell, M.D.F.A.C.P., Associate Professor, Clinical Pharmacology, Cornell University Medical School, First Edition, cloth. Format: 5½ x 8½, double column, dictionary style. $2.00.

This concise volume has a place in the library of every practitioner using pharmaceutical and biological products. It answers most of the important questions about drugs any doctor has brought to his attention daily and the book seems as reliable as any formulary anywhere. It is comprehensive enough to be universally useful.

Doctor Modell, who is a pharmacologist as well as a practicing internist is aware of the drug problems and situations a physician is confronted with from time to time. The selection of information that is essential and likely to be needed in practice is good and the author, in his preface, states the criteria for the inclusion of drugs. Old, abandoned therapeutic agents are excluded and some of the latest preparations do not appear.

Interchange listing of drugs by official and proprietary names simplify identification and the use of grouping in a pharmacological sense invites comparison of competing preparations, as well as refreshing the memory as to nomenclature.

The text is written using the metric system of measure, but conversion to the apothecary system is easily accomplished by the use of an available table found in the first pages of the book.

Since the author proposes annual revisions of this information, availability of information accorded new drugs will assist the physician in keeping pace with the vast field of pharmacologic research and development.—Nevin W. Dodd, M.D.

KIEFFER DAVIS, M.D., medical director of Phillips Petroleum company, Bartlesville, was recently installed as president of the industrial Medical Association at the four day annual meeting of the association in Buffalo, New York.

Have You Heard?

A. N. DEATON, M.D. has moved from Wewoka to Fayetteville, Ark. where he will be associated with the Veterans Administration hospital.

W. H. CLARK, M.D., formerly of Corona, Calif. has joined the staff of the Kiowa Indian hospital.

CHARLES GREEN, M.D., Lawton, spoke at an April meeting of the Kiwanis club of that city.

WILLIAM E. SIMON, M.D., former Alva physician who died in 1947, was honored recently by having a new prayer room dedicated to him in the Alva General Hospital. Furnishings for the room were made possible by more than 200 families who contributed to a memorial fund for the former Alva physician.

JAMES W. PARKER, M.D. has opened his offices in Lawton. Doctor Parker, who formerly practiced in Elk City, for the past year has been chief of the surgical service with the Hospital Vicente D'Antoni, Standard Fruit and Steamship Co., La Ceiba, Honduras, Central America.

JACK A. WOOD, M.D. has returned to Seminole after serving more than two years in the navy as flight surgeon assigned to a marine air wing at Chi Chi Jima in the Pacific and Cherry Point, N. C.

J. B. TOLBERT, M.D., Mt. View, is the new Kiowa county medical consultant of the State Health Department.

FRED C. MERRIFIELD, JR., has opened his office in Waukomis. He also practices in Enid.

KARL B. PACE, M.D., Greenville, N. C., named General Practitioner of the Year at the A.M.A. 1954 Interim Session, was a guest of the Oklahoma City Medical Service Society luncheon recently.

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Annual Meeting Attendance Soars; House of Delegates Approves Building Construction and Sets Assessment

With a total physician attendance of 765, the 62nd annual meeting of the Oklahoma State Medical Association held in Tulsa May 8-9-10-11 was one of the most successful ever held by the O.S.M.A. Wives, guests and exhibitors brought the total registration to well over 1,000. R. Q. Goodwin, M.D., Oklahoma City, assumed the presidency at the inaugural dinner Tuesday night, May 10.

Eleven guest speakers addressed the scientific sections of the meeting. They were Walter C. Alvarez, M.D., George Crile, Jr., M.D., Juan A. Del Regato, M.D., Elmer Hess, M.D., Charles S. Houston, M.D., Robert B. Lawson, M.D., John L. Parks, M.D., William W. Scott. M.D., William A. Sodeman, M.D., James K. Stack, M.D., and Arthur Purdy Stout, M.D.

More than 700 Association members and their wives were guests of Blue-Cross, Blue-Shield at a buffet supper and program Monday night, May 9. Charles Houston, M.D., physician and mountain climber, showed colored movies and slides to the group.

At the House of Delegates meeting Sunday, May 8, the following officers were elected:

H. M. McClure, M.D., Chickasha, president-elect; George Ross, M.D., Enid, vice-president; W. W. Rucks, Jr., M.D., secretary-treasurer; John F. Burton, M.D., Oklahoma City, re-elected delegate to the A.M.A.; and Malcom Phelps, M.D., El Reno, re-elected alternate.

The following councilors were elected:

Dist. 3, C. M. Hodgson, M.D., Kingfisher, councilor, to succeed himself; Henry Russell, M.D., Enid, vice-councilor.

Dist. 4, C. A. Traverse, Alva, vice-councilor, for a one year term to fill the unexpired term of Joe Duer, M.D., Woodward, who succeeded to the office of councilor due to the resignation of L. R. Kirby, M.D., Cherokee.

Dist. 6, Elmer Ridgeway, Jr., M.D., and Peter Russo, M.D., both of Oklahoma City, re-elected as councilor and vice-councilor.

Dist. 9, F. R. First, M.D., Checotah, and I. W. Bollinger, M.D., Henryetta, re-elected to succeed themselves.

Dist. 12, W. T. Gill, M.D., Ada, councilor, and M. E. Robberson, M.D., Wynnewood, vice-councilor.

Dist. 13, upon the election of Doctor McClure as president-elect, the vice councilor, J. B. Miles, M.D., Anadarko, automatically became councilor and Charles E. Green, M.D., Lawton, was elected vice-councilor to fill Doctor Miles' unexpired term.

Elmer Hess, M.D., president-elect of the American Medical Association, addressed the House of Delegates.

A resolution was adopted expressing the regret of the House of Delegates concerning the absence of James Stevenson, M.D., Tulsa, A.M.A. delegate who was ill.

The House of Delegates unanimously approved the recommendation of the Council concerning the construction of a central office and authorized the placing of a special assessment of $35.00 on each member for the purpose of financing the construction of the building. The Council estimated the cost of construction of the building, including the land, to be approximately $91,615.00.

Hiram Jones, Executive Secretary of the American Medical Education Foundation, addressed the House of Delegates on the activities of the organization with regard to the augmenting of the needs of the medical schools regarding money to finance their operation. The House of Delegates voted to appropriate $500.00 to the subcommittee of the general health affairs committee to acquaint the physicians of the state in regard to the work of the American Medical Education Foundation.

John E. McDonald, M.D., Tulsa, a member of the American Medical Association committee on legislation, presented the program of the A.M.A. as it pertained to federal legislation.

Two resolutions of importance adopted by the House of Delegates concerned the accreditation of hospitals by the American Medical Association in lieu of the present method of accreditation by the joint accrediting commission of the American Medical Association, the American Hospital Association and the American College of Surgeons. The other resolution was in regard to the program of the United Mine Workers Association with reference to elective surgery for members to be done only by American board qualified specialists or fellows of the American College of Surgeons.

Complete proceedings of the House of Delegates will be published in the *Journal*. The first session minutes will appear in the July issue.

Cryptococcosis

(Continued from Page 176)

Robert Isham reported a growth of yeast-like cells on Loffler's medium but this was thought to be a contamination. One week later the patient had not improved on what was considered an adequate regime for epidemic meningitis. At this time the spinal fluid contained 2,280 cells, no bacteria and many budding yeast cells on direct smear. From the fluid a pure culture of Torula was grown. Dr. Howard Larsh of the University of Oklahoma confirmed the laboratory diagnosis.

Skin tests at this time for coccidioidosis, histoplasmosis and blastomycosis were all negative.

Roentgenograms of the skull and chest were negative. The conclusion was drawn that the skin lesion was also due to cryptococcus. The patient's course was steadily downward and he expired on the 41st hospital day.

Dr. James M. Neill[1] of Cornwell University Medical School is publishing a later paper which will report a study on the blood, urine, and spinal fluid.

REFERENCES

1. Neill, James M., Sugg, John Y., and McCauley, D. W. Serologically Reactive Material in Spinal Fluid, Blood and Urine from a Human Case of Reactive Cryptococcosis (Torulosis). Proc. Soc. Exp. Biol. and Med. 77:775 (August) 1951.

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PREDNISONE
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in rheumatoid arthritis
more potent
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lessened incidence
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PAUL LINGENFELTER, M.D., Clinton, was recently elected president of the Nace P-TA of that city.

EVELYN RUDE, M.D., who practiced three years in Saudi Arabia, has opened her offices in the Medical Arts Bldg., Tulsa.

O. W. STARR, M.D., Drumright, celebrated his 40th anniversary of his practice there by inviting all "Starr Brand" babies and their parents to attend a picnic as his guests.

ALLEN C. KRAMER, M.D., CHARLES EADS, M.D. and S. J. BRADFIELD, M.D., Tulsa, have recently completed their new medical center at 16th and Lewis, Tulsa.

EDWIN E. FAIR, M.D., Oklahoma City physician stationed at Sheppard Air Force Base, Wichita Falls, was guest speaker at the Presbyterian Men's Supper Club of Frederick recently.

JAMES D. MARTIN, M.D. and JOHN W. MARTIN, M.D., Cushing, have opened their new clinic in that city. A 12 room suite, it is finished in blonde mahogany wood panelling, light stone and tonecolor effects.

IRA MULLINS, M.D., Hominy, was recently awarded a 50 year pin by the Masonic lodge of that city.

J. E. MCDONALD, M.D., Tulsa, was a recent speaker at the monthly meeting of the Tulsa Society of X-Ray Technicians.

R. B. GIBSON, M.D., Ponca City, attended the International College of Surgeons 20th anniversary meeting in Geneva, Switzerland in May.

CHARLES E. MARTIN, M.D., Perry, has been elected president of the staff of Perry Memorial hospital.

W. P. LERBLANCE, JR., M.D., Hartshorne, was named outstanding man of the community for 1955 in a popular vote contest sponsored by the P-TA.

WILBUR G. LAWSON, M.D., will join the staff of the Newman Clinic, Shattuck, as pediatrician this summer.

J. W. KELSO, M.D., Okahoma City, recently spoke to the St. John's medical staff, Tulsa, and a Shawnee women's group on cancer.

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(1) Payne, R. W.; Shetlar, M. R.; Farr, C. H.; Hellbaum, A. A., ond Ishmael, W. K.: J. Lab. & Clin. Med. 45:331, 1955. (2) Bunim, J. J.; Williams, R. R., and Black, R. L.: J. Chran. Dis. 1:168, 1955. (3) Holbraak, W. P.: M. Clin. North America 39:405, 1955.

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Deaths

John S. Allison, M.D.
1867-1955

J. S. Allison, M.D., long time Tahlequah physician, died suddenly April 27 at his home.

Doctor Allison was born Nov. 15, 1867 near Johnsville, Ark. He was graduated from Vanderbilt Medical School in 1895 and began his practice at Uniontown, Ark. He later practiced in Evansville, Ark., moving to Tahlequah in January, 1910.

He established the first hospital in Tahlequah and was active in church and professional organizations being a charter member of the Kiwanis Club and an elder in the First Presbyterian church. He received his 50 year pin in 1948.

Guy B. Van Sandt, M.D.
1878-1955

Guy B. Van Sandt, M.D., Wewoka, died May 3 in Shawnee hospital after a short illness.

Practicing in Wewoka for more than 50 years, Doctor Van Sandt practiced for a short time in Oklahoma City. He was born Nov. 14, 1878, in Montrose, Ill. and graduated from Barnes Medical College, St. Louis. He served three years in the medical corps during World War I.

Doctor Van Sandt was a Mason and Shriner and a charter member of the Wewoka Rotary Club. He was a member of the First Presbyterian church.

Sidney C. Venable, M.D.
1890-1955

Sidney C. Venable, M.D., Tulsa, died March 28 after a long illness.

Doctor Venable had practiced in Tulsa since 1921 and retired in 1947 after being injured in a train accident.

Doctor Venable was a native of Sherman, Texas and received his bachelor of arts degree from Austin College, Austin, Texas. He was graduated from the University of Texas Medical School.

He was a veteran of World War I and was a member of the First Presbyterian church.

Powell K. Lewis, M.D.
1879-1955

Powell K. Lewis, M.D. pioneer Sapulpa physician, died April 29 after suffering a heart attack earlier in the day.

Doctor Lewis, who was born at Sparta, Tenn., May 4, 1879, was graduated from the University of the South Medical School at Sewanee, Tenn. He did postgraduate work at Vanderbilt University.

After practicing in Tennessee, and serving as house surgeon at the Skin and Cancer Clinic in New York City shortly after World War I, he came to Sapulpa in 1921.

An active civic worker, he was a past president of the Rotary club, member of the First Methodist Church, and was the Frisco Railroad company doctor in Sapulpa for more than 25 years.

Survivors include one daughter, Miss Eunice Lewis of Norman, one son, James L. Lewis, also of Norman, one sister and two grandchildren.

Walter Henry Calhoun, III, M.D.
1897-1955

Walter Henry Calhoun, III, M.D., practicing physician in Tulsa since 1928, died May 10 in Rochester, Minn. of thrombocytopenic purpura.

Doctor Calhoun was born in New Bern, N. C. and graduated from Virginia Military Institute in 1925. He was graduated from the University of Virginia Department of Medicine and interned at University Hospital in Oklahoma City. He served his residency at St. Luke's General Hospital, Chicago.

He was a member of Alpha Kappa Kappa fraternity and St. John's Episcopal church.

Eli P. Nesbitt, M.D.

Eli P. Nesbitt, M.D., Sheridan, Mo., former Tulsa physician, died April 23 while visiting a brother, P. P. Nesbitt, M.D., Tulsa.

He graduated from Central Medical College, St. Joseph, Mo. and practiced in Tulsa from 1926 to 1945.

W. M. Gallaher, M.D.
1877-1955

W. M. Gallaher, M.D., Shawnee, died April 2 following a heart attack.

Doctor Gallaher was born in Wheat, Tenn., now Oak Ridge, March 1, 1877, and attended the Chattanooga Medical school—Grant University. He practiced at Foreman, Ark. before coming to Shawnee in 1909.

He was a member of the American Legion, Camp Fire Board, Masonic Lodge, a past president of the Rotary Club, and member of the First Presbyterian Church which he served as elder for more than 50 years. He was a member of the school board for 35 years and was president for 16 years. He served as secretary of the board of education for several years also.

Survivors include the widow of the home, two sons, Doctors Clinton and Paul Gallaher of Shawnee, and one daughter of Oklahoma City.

Fred S. Clinton, M.D.
1874-1955

Fred S. Clinton, M.D., pioneer physician and oilman, died April 25 in a Tulsa hospital after a five month illness. He retired from active practice 29 years ago.

Doctor Clinton was born near Okmulgee April 15, 1874. He attended Drury College, Springfield, Mo., Young Morris College in Georgia and Kansas City College of Pharmacy and Allied Sciences and the University Medical School, Kansas City. He began practicing in Red Fork and two years later moved to Tulsa.

When ill health forced him to retire, he began compiling historical data and he completed a number of books and historical pamphlets. He built one of Tulsa's first office buildings and had previously brought in one of Tulsa County's first oil wells.

He was active in medical, historical and petroleum organizations and the Methodist church.

(Continued on Page 190)

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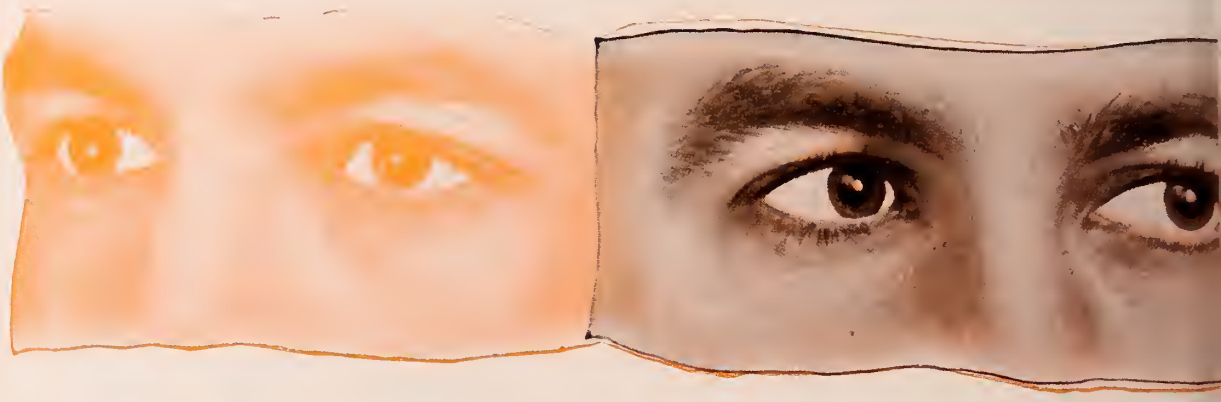

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Deaths

(Continued from Page 187)

William P. Ruddell, M.D.
1887-1955

William P. Ruddell, M.D., Davis, died April 2 following an extended illness.

Doctor Ruddell was born in Arkansas and had been practicing medicine since 1911. Doctor Ruddell opened his practice in Arkansas and moved to Altus in 1916. He moved to Sulphur in 1936 and to Davis in 1947.

E. R. Barker, M.D.
1877-1955

E. R. Barker, M.D., Healdton, practicing physician for more than 50 years, died April 23 after several weeks' illness.

Doctor Barker was born in Tallapoosa, Georgia, and attended the University of Tennessee, graduating from Ecletic Medical School, Kansas City, Mo. He was a member of the First Baptist Church, the Masonic Lodge, Shrine, Lions Club and had held several offices in his county medical society.

Henry L. Johnson, M.D.
1885-1955

Henry L. Johnson, M.D., former superintendent of Western State Hospital, Fort Supply, died April 25 in an Oklahoma City hospital following a short illness.

Doctor Johnson was born at Grapevine, Texas, Feb. 3, 1885. He graduated from the University of Oklahoma School of Medicine. He came to Western State Hospital in 1929. In 1953 he retired from hospital work and moved to Woodward.

Norman Medical Center which houses Fred C. Buffington, M.D. and William R. Patten, M.D. and a dentist was opened recently. The one story building, constructed of brick, steel and blocks, contains a total of 22 rooms. The outside construction is of buff-red brick and all inside walls are of composition pumice block.

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AMA Surveys County Societies

To find out what county medical societies throughout the country are doing and to help them develop new public service programs, the AMA's Council on Medical Service currently is distributing questionnaires to officers of the 1,911 county and district medical societies in the United States.

The most complete of its type ever undertaken, this survey covers all major areas of society interest—including meetings, committees, programs and activities, insurance programs, dues, office facilities, and personnel. Since this is the only way that the Association can keep abreast of society activities, the Council hopes that all questionnaires will be returned as soon as possible.

The information gleaned from these reports will be invaluable aids to societies seeking assistance in expanding their activities and will help the Council's staff increase its ability to be of service to society officers and members. This year's survey is being conducted in cooperation with the Department of Public Relations.

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Garnet W. Ault, M.D., Washington, D.C. — Proctology
Walter P. Blount, M.D., Milwaukee — Orthopedics
James Barrett Brown, M.D., St. Louis — Surgery of Trauma
Ewald W. Busse, M.D., Durham, N.C. — Psychiatry
J. Lamar Callaway, M.D., Durham, N.C. — Dermatology
Paul R. Cannon, M.D., Chicago — Pathology
Thomas M. Durant, M.D., Philadelphia — Geriatrics
Donald F. Hill, M.D., Tucson — Int. Medicine
E. A. Hines, M.D., Rochester, Minn. — Int. Medicine
Frank D. Lathrop, M.D., Boston — Otolaryngology
John M. McLean, M.D., New York City — Ophthalmology
George T. Pack, M.D., New York City — Surgery
F. Johnston Putney, M.D., Philadelphia — Otolaryngology
Tracy O. Powell, M.D., Los Angeles — Urology
Algernon B. Reese, M.D., New York City — Ophthalmology
Maurice S. Segal, M.D., Boston — Int. Medicine
Joseph Stokes, Jr., M.D., Philadelphia — Pediatrics
H. Hudnall Ware, Jr., M.D. Richmond, Va. — Obstetrics
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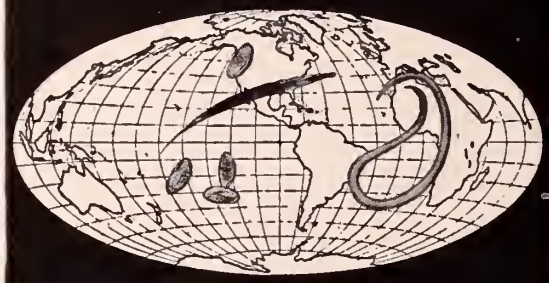

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Medical Societies

Stephens County

Members of the Stephens County Medical Society participated with the American Cancer Society in the cancer detection physical examinations recently held in Duncan. A regular meeting of the Stephens County Medical Society was held after the examinations with the three Oklahoma City physicians who formed the detection team as guests. They were John Coyle, M.D., J. Samuel Binkley, M.D., and John R. Danstrom, M.D.

Alfalfa-Woods

Robert Shuttee, M.D., and Henry Russell, M.D., both of Enid, were guest speakers at a recent meeting of the Alfalfa-Woods County Medical Society held in Cherokee. Program chairman was John X. Blender, M.D. of Cherokee. Members of the Auxiliary also attended the dinner.

Creek County

"Endocrine Projects" was Dr. R. Palmer Howard's topic when he recently addressed the Creek County Medical Society in Bristow. Doctor Howard is head of the endocrinology, metabolism and arthritis section of the Oklahoma Medical Research Foundation.

Cleveland McClain

Physicians were guests of their wives at a recent Doctors Day dinner sponsored by the Cleveland-McClain County Medical Society. Approximately 70 were in attendance. Welcome was given by Mrs. James O. Hood and the response was given by Curtis Berry, M.D.

Woodward-Ellis-Harper

Physicians from Woodward, Ellis and Harper counties met in Mooreland recently at the Northwest Community hospital. Physicians from the three counties hold an annual meeting each year at Mooreland in April. A program was conducted by Frank L. Adelman, M.D., superintendent of Western State Hospital, Fort Supply. Approximately 50 doctors and guests attended.

Around the State

Tulsa County

Among the recent Tulsa County Medical Society programs was an address by John H. Mulholland, M.D., professor and chairman of the department of surgery at New York University School of Medicine. His topic was "Acute Cholecystitis."

Cancer Control Course

A two week cancer control course is being sponsored by the State Health Department and the University of Oklahoma through its divisions of Medicine, School of Nursing and Extension Department June 13—June 25.

The course will cover the pathology, diagnosis and treatment, as well as nursing care and patient education. It is designed primarily for medical and nursing personnel who are responsible for the care and supervision of patients who have been treated for cancer. Much of the teaching program will be provided by staff members of the departments of pathology, surgery, radiology, medicine and nursing. Registration fee is $25.00.

Lecture, Exhibit Applications For Boston Session Due Now

All persons who desire a place on the lecture program at the Boston Clinical Meeting of the American Medical Association to be held Nov. 29—Dec. 2, are urged to communicate immediately with the Chairman of the Program Committee — Theodore L. Badger, M.D., c/o Massachusetts Medical Society, 22 The Fenway, Boston 15.

Applications for space in the Scientific Exhibit are now available and will be sent on request. Exhibits will supplement the lectures as far as possible, and should portray subjects of a broad general interest. Requests for applications should be sent to the Secretary, Council on Scientific Assembly, American Medical Association, 535 N. Dearborn St., Chicago 10, Illinois.

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

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Brown, H. W.: J. Pediat. 45:419, 1954.

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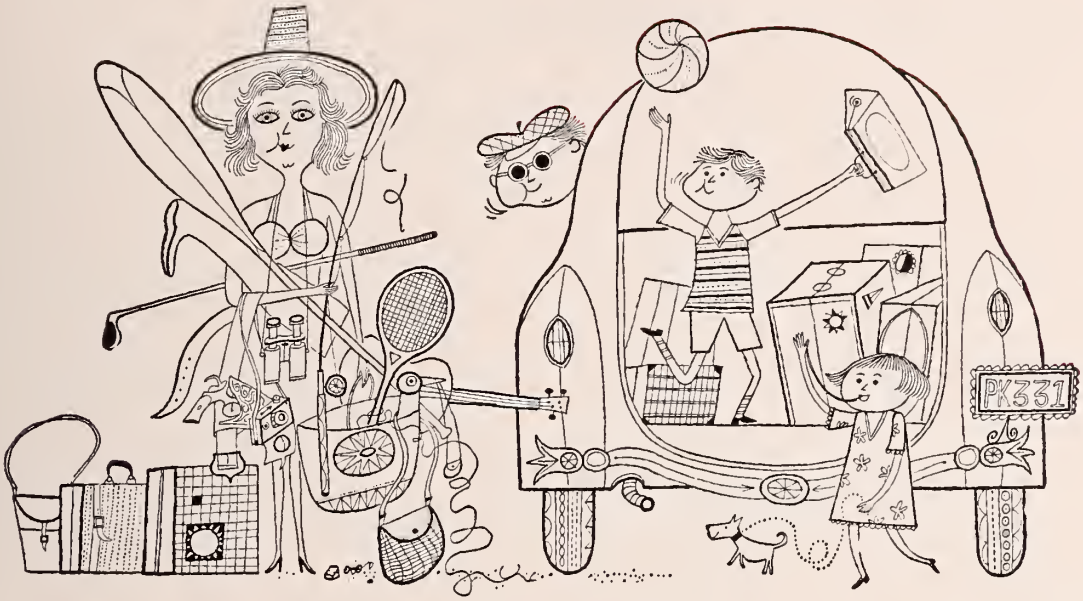

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R. Z. TAYLOR, M.D., Blair, was honored with a "Doctor Taylor Day" in that city recently.

Student A.M.A. Officers

New officers in the Student A.M.A. organization at the School of Medicine are: Paul Compton, El Reno, president; Gregory Green, Seminole, vice president; Bill Bernhardt, Kingfisher, secretary, and William Savage, Oklahoma City, Treasurer.

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NOTICE: Physician with old established general practice and good downtown location in Oklahoma City, who is slowing up and planning on retirement a little later has good proposition for young general practitioner who will do obstetrics and perhaps some surgery. Contact Key H, care of the Journal.

FOR SALE: Physician's office furniture and equipment. Reasonable rate. Reception room furniture, ice box, safe, X-ray, fluoroscope and dark room, scales, surgical instruments, practically new examining table and matching cabinet. Good opening for a young doctor wishing to locate in a town of 25,000 in eastern Oklahoma. Office equipment still in original space. This space is available at a reasonable rent. Contact Miss Eunice Lewis, 502 Lindsay Road, Norman, Okla.

FOR SALE: Surgical, obstetrics instruments. Plate glass instrument cabinet. Electronic equipment. Contact Mrs. Dan Gray, Guthrie, Oklahoma. Phone 393.

WANTED: General practitioner to fill vacancy in Stilwell, Oklahoma, population 2,500, county seat, new 18 bed hospital. GP leaving June 1. Heavy general, obstetrical, and surgical practice grossing $24,000 last year. Modern air conditioned office with General Electric fluoroscope and patient records available if desired. Contact B. F. Green, M.D., Stilwell, Okla.

WANTED: Surgeon and GP to head three man group in rural hospital, northwest Oklahoma. Excellent opportunities. Northwest Community Hospital, Mooreland, Oklahoma, c/o Administrator.

FOR SALE: Clinic, all equipment, practice established, excellent set up for one or two young doctors; easy terms. M. S. Anderson, Wewoka, Oklahoma.

Editorials

"Some Thoughts On Juvenile Delinquency"

John Steinbeck, writing in the *Saturday Review*, thinks we could learn something from the Middle Ages. We have outgrown some of their savagery, but we have overlooked some of their virtues. He points out that in feudal law everyone was responsible for something. Every member of the family was responsible for every other member. In the village this same responsibility obtained. The family was discredited and sometimes punished if one of its children committed a crime. The reverse was also true. The group took honor from an honorable deed of one of its members. Everyone belonged to something, something powerful. "A child could not say that lonely, cold thing—'Get it over. Hang me.'—because his deed, whatever it was affected his father and mother, his brothers and sisters, his cousins. He was less likely to act violently if his act destroyed everything he loved and respected. Not only was the child responsible to the family, but the family and the village were responsible to and for the child. A father, then, who said he didn't know what his son was up to would have been laughed out of court. He was supposed to know. He had to know. His failure to know brought punishment not only on himself but on the whole group."

A child needs something to which he can give his loyalty and his courage. If the family cannot fulfill this natural role, the child may seek a gang to which he can feel responsible. He is a delinquent when he will not sing to the police about the affairs of his gang—but the same child, motivated by the same human desire to be loyal to the group, is a hero when he refuses to give information to the enemy.

Mr. Steinbeck has for many years exposed his life-long observations of people to the critical eye of the reading public. He should be seriously listened to when he speaks on any facet of human conduct. His concept is an intriguing one because it offers a positive approach. Those who are responsible for conceiving group function must see to it that the group itself is the important tie to the child and that the group is responsible for the conduct of its members—Cub Scouts, Brownies, Girl Scouts, Camp Fire Girls, Boy Scouts, the Sunday School, the church, the school, the team, the job, the fellow employees.

Who's The Loser?

We are not acquainted with all of the facts concerning the controversy now being aired in the public press concerning the Crippled Children's Commission.

It would seem to us that the Governor, the Commission, and the Commission's Director should keep in mind only one thing—to develop a policy that will give the crippled children of the State of Oklahoma the best possible medical and hospital care irrespective of which hospital in the State is to receive Commission funds.

Readers are especially urged to read the essay on the nex page entitled "A Medical Student Looks at Blue Shield" by James Crabtree, senior medical student from Clinton. Winning essayist in the Oklahoma contest, he was presented with a $50.00 bond.

A Medial Student Looks At Blue Shield

Jim Crabtree

One of the problems today of which medical students are acutely aware is the problem of future socialization of the medical profession. We are told constantly of physicians who overcharge, don't respond to calls, and the lack of proper medical attention to certain groups. We are also told that it is a problem which only we can cure.

What causes these evils? What can we do about them? All of us are sure we wouldn't be involved in such charges, yet there must be some reason for an old and honored profession to have these things laid before it. Perhaps there is a side which hasn't been properly explored or answered.

Could it be that after years of costly preparation and education the doctors feel they should be receiving a proper financial return? I'm sure it is. But, with the abundance of patients why not charge a proper fee from each patient, why penalize a man who has worked hard to accumulate some wealth by overcharging him? Maybe the answer lies in the fact that so many patients are unable to pay a just fee. The doctor feels his only way to recoupe is to overcharge those able to pay. I'm sure that many of the calls which go unanswered are the results of a choice between a paying and non-paying patient.

Is there anything we can do to correct this? Why do so many patients who are not actually destitute let payments of doctor bills go? Today's economy, with installment buying, the rule rather than the exception, house payments, appliance payments, car payments, etc., has people in the lower incomes living to the limits of their earnings. It is natural. It is encouraged by industry, advertising, and the Joneses down the street. A sudden, expensive doctor bill is just not expected, let alone budgeted for. It is not the occasional doctor's service which is unexpected but the expensive surgical procedure, accidents and illnesses. Often we must add not only the direct expense, but also the loss of earning capacity during this period. This burden faces the patient, and to him the most logical person to wait for payments is the doctor. To me, the only possible solution, short of socialization, with its many evils, is voluntary, prepaid medical insurance.

Blue Shield, conceived by and given birth to by the Medical Profession is one of the medical profession's first attempts to answer this problem. The tremendous growth of Blue Shield throughout the country has shown that the public is acutely aware of the need for such a plan. It also bears out the basic desire to pay one's own way, if only shown the proper path to follow.

The advantages of such a plan as Blue Shield lies in the close cooperation obtainable between doctor and patient. The patient is assured of a doctor of his own choice and of specific services which will be covered. The doctor, on the other hand, has a cooperative patient and an assurance of a just fee for services rendered.

One must realize that we are still in the adolescence of the Plan's growth. There are, of course, deficiencies in this young giant, ideas still to be developed, evils to be eliminated, and expansions to be expected in certain groups and fields. We must add a plan which gives diagnostic coverage, since early diagnosis is the primary consideration in so many diseases seen today. There is also the need for more complete coverage of those patients with chronic debilitating illnesses. The doctors must not abuse this plan by using it as a collection agency, for this merely raises the rates and makes the plan available to fewer people.

I believe these considerations will be met and conquered in time. By urging participation in Blue Shield, a doctor not only helps others to help themselves, but also helps himself and his profession.

Scientific Articles

An Appraisal of
SEGMENTAL PULMONARY RESECTION
with Three Illustrative Cases

JOHN M. CAREY, M.D. and GERALD S. DOWDY, JR., M.D.

Resection of pulmonary segments has become widely accepted only within the past decade. The basis of this form of thoracic surgery lay in the recognition of the segment as the pathologic unit in certain diseases. Advances in segmental anatomy, pulmonary physiology, and thoracic surgical techniques generally were also fundamental to the development of this field. A wider recognition of the indications and limitations of segmental resection is worth further emphasis and forms the objective of this report.

Segmental pulmonary resection has several advantages over lobectomy or pneumonectomy. First, certain diseases assume a pattern of involvement according to specific bronchopulmonary segments and removal of these segments alone is curative. Tuberculosis most significantly involves the apical and posterior segments of the upper lobe and the superior segments of the lower lobes. Lung abscess is most common in superior segments of lower lobes or posterior segments of upper lobes. Bronchiectasis, in more than 80 per cent of cases, is multisegmental in distribution and has greatest predilection for basilar segmental bronchi and the lingular segment. By conserving as much normal pulmonary tissue as possible in these conditions it has been feasible to perform not only unilateral but also staged bilateral operations.

Secondly, segmental resection preserves a maximum of lung tissue as protection against further encroachments of time and disease on pulmonary function. In the patient with borderline reserve, the value of preserving the maximum amount of functioning tissue is obvious.

Finally, conserving normal tissue allows an easier filling of thoracic space and hence less secondary emphysema than after lobectomy or pneumonectomy. In addition to cases of bronchiectasis and tuberculosis, segmental pulmonary resection is indicated in selected cases of lung abscess, cystic disease of the lung, and certain benign tumors.

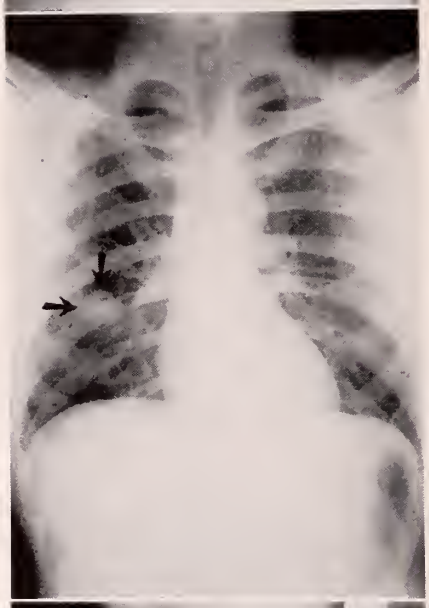
The value of segmental surgery may be lost when significant postoperative complications occur. These complications include broncho-pleural fistula, remaining segments which are incompletely expanded, pleural effusion, empyema, or clotted hemothorax. Such complications after segmental resection may cause even greater loss of pulmonary function after lobectomy. Difficulties will be kept to a minimum by accurate preservation of vascular supply to remaining segments, by adequately removing accumulations of air and fluid from the chest after surgery, and by maintaining a clean tracheobronchial pathway postoperatively.

The incidence of postoperative complications is somewhat higher after segmental pulmonary resection than after lobectomy.

THE AUTHORS

Doctor Carey was a member of the staff of Oklahoma City Clinic and the Veterans Administration Hospital at the time the article was written. He is a graduate of Harvard. Doctor Dowdy, who is now in practice in Enid, is a graduate of Oklahoma School of Medicine and was a resident in surgery at the V. A. Hospital at the time the article was written.

The views of the authors do not necessarily reflect the opinions of the Veterans Administration.



Consequently, segmental resection, except of the superior segments of either lower lobe, is not justified when only one segment of a lobe is to be conserved. It has been common practice to remove the basilar segments of either lower lobe as a unit because of technical difficulty with individual basilar segmental resection.

Segmental resection obviously would not be indicated if significant disease would be left in the remaining segments of the same lobe. In this regard, many forms of pulmonary pathology, such as the usual suppurative lung abscess or cystic disease of the lung, involve a lobe so extensively that segmental resection is not feasible. Since the drainage of the pulmonary lymphatics is chiefly along pleural surfaces and toward inter-lobar clusters of lymph nodes, it is doubtful if segmental resection is ever indicated in malignant processes of the lungs. A possible exception to this rule might be the unusual patient with an isolated, small, peripheral, metastatic pulmonary nodule.

The following cases illustrate the usual indications for pulmonary segmental resection:

Case 1.

H. B., Jr., a 32 year old white man, a milk bottler, gave a history of chronic cough, productive of moderate amounts of yellow sputum for 12 years. Between the ages of 9 and 12, the patient had pertussis, measles and scarlet fever without any known sequelae. Since the onset of the present illness, the patient said, he would produce about one teaspoonful of sputum 10 to 15 times each day. Ten days before he was admitted to the hospital, he produced approximately one cup of blood-streaked sputum. There was no history of chills, fever, or septic complications.

Fig. 1. Case 1, H. B. Jr. Preoperative bronchogram demonstrating saccular bronchietasis confined to lingula and the basilar segments of left lower lobe.

Fig. 2. Case 2, H. D. Preoperative roentgenogram showing mass in region of superior segment of right lower lobe.

Fig. 3. Case 2, H. D. (lateral) Tomogram showing abscess cavity with central cone in superior segment of the right lower lobe.

Physical examination on admission was negative except for dental caries; hypertrophied, cryptic tonsils; and some moist, crepitant rales and decreased breath sounds over the left lower chest. Routine laboratory studies were within normal limits. Six smears of the sputum for acid fast organisms were negative. Culture of the sputum showed the usual flora. Routine roentgenogram of the chest showed increased markings at the left base suggestive of bronchiectasis. Bronchoscopy performed on September 15, 1954, was normal except that considerable amounts of yellow mucoid sputum were obtained from the depths of the lower lobe and a smaller amount from the upper left lobe. Bronchograms were taken on October 26, 1954 (Fig. 1). As illustrated, they show cystic bronchiectasis confined to the basilar segments of the lower lobe and the lingular segment of the left upper lobe. Preliminary to thoracic surgery, the patient underwent multiple dental extractions and a tonsillectomy.

On December 7, 1954, with the patient under endotracheal gas-oxygen-ether anesthesia, a segmental resection of the contracted basilar segments of the left lower lobe and of the lingular segment of the left upper lobe was carried out without incident. Three whistle-tipped French catheters were placed within the chest cavity to insure adequate re-expansion of the remaining lung and to provide for postoperative drainage of air and fluid. Convalescence was uneventful. Cough and production of sputum decreased markedly. Clinically there has been no reduction of pulmonary function.

This case illustrates the common pattern in bronchiectasis of involvement of only basilar segments of the lower lobe and of the lingular segment of the upper lobe. Segmental resection made it possible to conserve a large superior segment of the lower lobe and the apical-posterior and anterior segments of the upper. These segments filled the left hemithorax easily and preserved a maximum of normal lung tissue.

Case 2.

H. D., a 33 year old Negro man, was admitted to the hospital with a mild cough which had been present for six weeks and

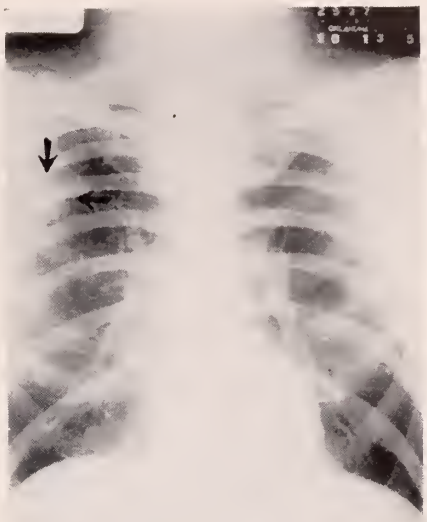


Fig. 4. Case 3, G.G.L. Preoperative roentgenogram demonstrating residual focus of tuberculosis in posterior segment of right upper lobe.

Fig. 5. Case 3, G.G.L. Lateral roentgenogram demonstrating residual tuberculosis focus in posterior segment of right upper lobe.

which produced a scant amount of sputum. About six weeks before his admission to the hospital he had coughed up a small amount of blood. There was no history of aspiration of foreign body, of prior pulmonary infection, of fever, chills, or of putrid sputum. The patient was of marginal intellect, and the history was considered unreliable.

On admission to the hospital, routine physical examination gave evidence of some old corneal scarring of the left eye due to chronic

iritis and uveitis. Auscultation of the lungs revealed a few moist and sibilant rales over the right mid-lung field. Routine laboratory studies demonstrated no significant abnormalities. Sputum examinations for tubercle bacilli on four different occasions were negative. Routine culture of the sputum showed only the usual flora. Roentgen examinations of the chest revealed a 3 by 4 cm. rounded density in the region of the superior segment of the right lower lobe (Fig. 2). Frontal and sagittal tomograms taken in this area showed a radiolucent halo, approximately 3.5 cm. in diameter (Fig. 3), in the center of which was a rounded, hemogenous mass approximately 2 cm. across. There was no calcification in the lesion.

Bronchoscopy was performed on November 15, 1954, and examination of all segmental bronchi, including the superior segmental bronchus of the right lower lobe, was within normal limits. Diagnostic possibilities considered in this patient were chronic lung abscess, a tuberculous abscess, an aspirated foreign body with marginal liquefaction and abscess formation, echinococcus cyst, and fungus disease.

The patient was maintained on chemotherapy for a two weeks' period, during which there was no apparent regression in the size or configuration of the lesion.

On November 23, 1954, with the patient under endotrachael gas-oxygen-ether anesthesia, thoracotomy was performed through the fifth intercostal space, and segmental resection of the superior segment of the right lower lobe and of the subsuperior segment of the right lower lobe was carried out without event. Three whistle-tipped French intercostal tubes, varying in size from No. 24 to No. 26, were placed within the chest for postoperative drainage of air and secretions. The patient had an uneventful convalescence. Adequate cultural studies of the specimen were not obtained, but pathologic examination of the involved segment revealed only a fibrin ball and a chronic non-specific lung abscess.

The position of this chronic lung abscess, confined to the superior segment of the right lower lobe, permitted localized resection, although lower lobectomy would probably have been equally permissible.

Case 3.

G. G. L., a 49 year old white man, was admitted to the hospital on May 14, 1954. For many years he had had a chronic cough which had been ascribed to cigarette smoking. There had been some recent increase in the amount of coughing since April, 1954. At that time the patient had an episode of hemoptysis. In the past few months there had been a weight loss of 10 pounds. Two weeks before he was admitted to the hospital he had an episode of night sweats.

Routine roentgen films of the chest taken on November 21, 1953, had revealed an infiltration in the upper portion of the right chest consistent with an inflammatory lesion. In May, 1954, another roentgenogram of the chest showed no significant change in the appearance of this lesion.

The patient was admitted to the Veterans Administration Hospital in May, 1954, for further study. When he was admitted to the hospital, routine laboratory study of the patient was within normal limits. Sedimentation rate was 27 mm. an hour, the vital capacity was 3 to 3.5 liters a minute. One sputum examination performed at the time of hospitalization revealed acid fast bacilli. However, 10 subsequent smears of the sputum for acid fast bacilli were negative. Culture of the sputum for acid fast bacilli on May 17, 1954, was positive for Mycobacterium tuberculosis. Shortly after admission the patient was placed on streptomycin, grams 1, twice weekly, and sodium para-amino-salicylate, 3 grams, 4 times daily.

On the foregoing program and a period of limited ambulatory activity, the patient became asymptomatic. Subsequent examinations of the sputum were negative for tuberculosis, the last positive culture being obtained on July 20, 1954. Serial roentgenograms of the chest revealed only initial slight decrease in the size of the lesion in the right upper chest, which formed a non-calcified, rounded mass, measuring approximately 4 cm. in diameter (Figs. 4, 5). Because of the size and stability of the lesion, which was

considered to represent a tuberculous granuloma, surgical intervention was offered and accepted.

On November 23, 1954, a right thoracotomy with incision through the fifth intercostal space was performed, and resection of the posterior segment of the right upper lobe was carried out. For postoperative drainage of fluid and air, three No. 24 to No. 26 French intercostal catheters were placed within the chest cavity. Postoperatively the patient's course was marred only by a transient, mild psychosis. The patient subsequently made a good recovery. Pathologic examination of the excised segment showed a caseous granuloma, consistent with tuberculosis. On December 18, 1954, three gastric cultures for tuberculosis were negative for tubercle bacilli. There has been no clinical reduction of pulmonary function.

Surgical intervention for residues of tuberculous disease has been a subject of considerable debate and revision. The present rather generally prevailing opinion, however, is toward excision of significantly large residues of tuberculous disease to forestall possible future breakdown and a spread of activity.

Summary

The values and the limitations of segmental pulmonary resection have been outlined, particularly for bronchiectasis and for tuberculosis, as well as for other localized forms of pulmonary diseases. This procedure has become and will remain a significant part of the armamentarium of the thoracic surgeon. Three cases illustrating segmental pulmonary resection in bronchiectasis, in chronic lung abscess, and in residual tuberculous disease have been presented.

Cuban Red Cross Honors Mr. C. P. Loranz and Dr. Tom D. Spies

In Havana, Cuba, on Tuesday evening, March 15, 1955, in the Auditorium of the Headquarters Building of the Sociedad Nacional Cubana de la Cruz Roja (Cuban Red Cross) the rank of Comendador (Exalted Knight) in the high Order of Honor and Merit of the Cuban Red Cross was conferred on Mr. C. P. Loranz, now Advisor and Professional Relations Counselor of the Southern Medical Association, and prior to December 1, 1954, for nearly 40 years its Secretary and General Manager, Birmingham, Alabama, and on Dr. Tom D. Spies, Codirector, Pabellon Especial, General Calixto Garcia Hospital, University of Havana, Havana, Cuba, Director of the Nutrition Clinic, Hillman Hospital, Birmingham, Alabama, and Professor and Head of the Department of Nutrition and Metabolism, Northwestern University Medical School, Chicago, Illinois.

The United States Embassy was officially represented by its Cultural Affairs Officer, Mr. Francis J. Donahue. The exercises were televised.

Dr. Jose A. Cruels, Secretary of the Cuban Red Cross, made the principal address, explaining the outstanding merits of the distinguished Americans which justified the honor to be bestowed on them. Dr. Angel Reaud, President, Colegio Medico de la Habana (Havana Medical Association), spoke for his Association and translated into English the highlights of the address by Dr. Cruels.

Dr. Augusto Fernandez Conde, President, Colegio Medico Nacional de Cuba (Cuban Medical Association), speaking for his Association, told of these two distinguished Americans having been made honorary members of his Association on December 3, 1954, pointing out the services that each had rendered in the field of medicine and expressing the appreciation of the medical profession of Cuba for the work each had done, Mr. Loranz for his work for twenty-five years in the establishing of better professional relations between physicians of the Southern United States and Cuba, and Dr. Spies for his work in the field of research in medicine, particularly for his work in Cuba.

DERMATOSES *of the* HANDS

JAMES W. BURKS, JR., M.D.

Eruptions of the hands represent the largest and most important group of dermatoses in the general practice of medicine and comprise 10 per cent or more of the dermatologist's practice. It is said that the hands get into everything and are seen by everyone. They not only reflect the general state of health, occupation, and personality of the patient but, more importantly, may cause prolonged suffering, incapacitation, social conflicts, and economic crises. To present such a subject adequately would require a monographic treatise to deal exclusively with those classifiable diseases about which a great deal is known and, in addition, a subsequent edition to cover the eczematoid eruptions of the hands. In the following presentation, an attempt will be made to give the general practitioner a guide to diagnosis and treatment without the burden of academic or philosophic aspects of the subject, which have been discussed authoritatively in recent publications by dermatologists. [1, 2, 3]

That the hands are special organs requiring special treatment has been emphasized by Kanavel.[4] The skin of the hands, as a protective covering separating the patient from his environment, differs in a number of respects from the skin of other anatomic sites. There is an overall sparseness of tissue, especially on the dorsa of the hands, where a relative lack of subcutaneous tissue accounts for unfavorable reactions to extremes of temperature, sunburn, and other traumata. Palmar epithelium, blessed with a thick keratin layer, is devoid of sebaceous glands and hair follicles and is heavily seeded with sweat glands. The vascular system and sweat apparati are especially subject to influences of the autonomic nervous system. As an organ of highly developed tactile sensation, with the aid of 50 muscles capable of over 300 movements, the hand comes in contact with many substances to which no other cutaneous sites are exposed.

THE AUTHORS

Doctor Burks was a guest speaker at the Annual Meeting of the Oklahoma Academy of General Practice at which time he presented the paper published in this issue of the Journal. He is assistant professor of medicine at Tulane University and senior associate in dermatology at Touro Infirmary. He is president of the Louisiana Dermatology Society and a graduate of Vanderbilt University, Washington University and University of Minnesota from which he received his A.B., M.D. and M.A. degrees.

Classification

Classification of dermatoses of the hands is a controversial subject that has been discussed in recent publications.[2, 4] For simplicity and ease of usage, the following delineation seems to suffice: (1) diseases of internal origin and and/or manifestations of systemic disease, (2) diseases of external origin, and (3) diseases of unknown etiology.

(1) *Eruptions of internal origin:* Cutaneous manifestations of systemic origin are usually bilateral and symmetric and are seldom confined solely to the hands, except in the case of fixed drug eruptions, late syphilis, and herpes zoster. Some examples of these are the exanthematous diseases, rubeola, scarlatina, varicella, variola, rickettsial diseases and Rocky Mountain spotted fever, deep mycoses, tuberculosis, drug eruptions, erythema multiforme, urticaria, dietary insufficiencies, bacterids, dermatophytids, diabetes, myxedema, hyperthyroid states, and food allergy.

(2) *Dermatoses of external origin:*

(a) *Contact dermatitis* of the hands may be due to a non-specific acquired hypersensitivity as, for example, to soap and water (so-called housewife's eczema), or it may be the result of a specific acquired sensitivity, such as an allergy to metal. This subject will be discussed more completely later.

(b) *Parasitic infestations of the skin* may

be due to superficial mycoses, including dermatophytosis and moniliasis. Widespread use of the broad spectrum antibiotic drugs has resulted in a higher incidence of the monilial group of eruptions, which characteristically involve the webs of the fingers. Other infestations include amebiasis, schistosomiasis, myiasis, scabies, and tick bites.

(c) *Infection of the skin from the exterior* may be caused by bacteria, as exemplified by impetigo, furuncles, carbuncles, infectious eczematoid dermatitis, paronychia, diphtheria, anthrax, primary syphilis, and tuberculosis. Viruses may produce warts, molluscum contagiosum, and herpes simplex.

(3) *Dermatoses of unknown etiology* involve the hands alone or in conjunction with other cutaneous sites. They include infectious eczematoid dermatitis (eczema of the hands), localized neurodermatitis, psoriasis, lichen planus, lupus erythematosus, granuloma annulare, erythema multiforme, scleroderma, dermatitis herpetiformis, pemphigus, pityriasis rosae, seborrheic dermatitis, keratoderma blenorrhagica and keratoderma climactericum, pompholyx and dermatitis repens. Concurrent findings of the clinical features of these diseases elsewhere in the body are essential for diagnosis.

The eczematoid group comprises the largest group of unknown eruptions of the hands either as a disease entity or as a complication of any one of the primary dermatoses. In a study of 475 patients with eczema of the hands, Lane and associates[1] classified, in order of frequency, the following types:

(1) Infectious eczematoid dermatitis idiopathic dermatitis of the hands, housewife's eczema, soap and water dermatitis).

(2) Contact dermatitis
  (a) Nonspecific acquired hypersensitivity
  (b) Specific acquired hypersensitivity

(3) Dermatophytid

(4) Bacterid

(5) Psoriasis

(6) Atopic dermatitis

(7) Pompholyx

(8) Dietary insufficiency

(9) Dermatomycoses

Predisposing Factors

Eczema of the hands, a plague to the dermatologist from both the etiologic and therapeutic points of view, may begin insidiously but can be prevented by the general practitioner, who often sees the disease in its incipiency. Apparently, there are both predisposing and exciting factors involved in the causation of eczema. According to Engman[5], the predisposition may be due to:

(1) Lowered threshold of irritability (congenital dryness).

(2) Increased capillary permeability (ids).

(3) Atopy (atopic dermatitis, infantile eczema).

(4) Allergy (epidermal or dermal sensitization).

(5) Psychosomatic factors (dyshidrosis).

(6) Endocrine factors (thyroid states).

(7) Focal infection (bacterids).

(8) Avitaminosis (vitamin A deficiency, pellagra).

(9) Seasons (hot and cold, pollens).

The addition of trauma to any one of the foregoing factors may excite an eczematoid dermatitis. The most frequent trauma is that due to soap and water, both of which are alkaline. Keratin, with a pH varying from 6.8 to 10.5, is readily hydrated by further alkalinization of soap and water in the process of washing the hands and, when hydrated, is inelastic. Exposure to extremes of temperature, especially cold, and later to trauma results in a state commonly called chapping. Such a state is frequently found in housewives, surgeons, waitresses, soda jerks, and bartenders. Other forms of injury, including thermal, actinic, and chemical. produce the same effect. When the chapped skin is superficially invaded by the normal flora of nonpathogenic bacteria, especially *Staphylococcus aureus*, eczema may develop through a process of auto-eczematization. The most plausible explanation of the evolution of this state, known as infectious eczematoid dermatitis or eczema, is that it is due to these bacterial toxins alone or to the products of degenerated tissue resulting from bacterial action either alone or in any of several combinations. Once the

host-bacteria relationship has been altered and dermatitis has developed, this anatomic region becomes one of the sites of least resistance wherein recurrence of eruptions may take place in a cyclic manner with or without the influence of exciting factors.

The incidence of housewife's eczema of the hands seems to have increased in direct relation to the efficiency of modern detergents. Besides soap and allied cleaners, housewives contact bleaches, polishes, waxes, insecticides, paint, mineral spirits, pine oil products, vegetables and fruits, and plants and cosmetic agents, such as dyes and perfumes. Whereas these may not irritate normal intact skin, they invariably complicate existing dermatitis. The part these agents play is illustrated by striking increase in eczema of the hands of mothers after the birth of a baby or after the loss of servants.

Diagnosis

The criteria for diagnosis of eczema of the hands due to soap and allied cleansers, according to Jordon and Osborne[6] are:

(1) Hands are completely free of eczema or improved during warm months.

(2) They improve during vacations, illnesses or other lapses in routine when irritants are avoided.

(3) Attacks of eczema are precipitated by frequent usage of these irritants.

(4) Eruptions are vesicular and confined to the hands, usually the dorsal aspect, with involvement of one or more fingers. Palms are seldom involved.

Specific acquired sensitivity is not nearly as common as eczema due to primary irritation, but when it does occur, it may be recognized by its distinctive pattern. Waldbott[7] has listed the patterns in his book, which is a valuable aid and time saver for the busy practitioner who seldom can afford the time-consuming effort of discovery by interrogation. Many of these patterns may be recognized at a glance by the patient as he peruses the book. Recently a new pattern has been added[8]: that due to holding onions and garlic. This eruption characteristically involves the distal palmar aspect of the thumb, index, and middle fingers of the left (holding digits) and the thumb of the right hand (grasping digit). Patch tests to extracts of these and allied plants confirm sensitization. Other patterns may occur from sensitization to nickel (rings), chrome (bathroom fixtures), and plastic materials (handles).

That eczema of the hands may be caused by *allergy to ingested foods* is a theory which has not been substantiated by my own experience. This opinion, however, is in direct contrast to that of Rowe[9], who estimates that eight per cent of cases of eczema of the hands are due to foods. On the other hand, there seems to be general agreement that skin tests are of no value in such cases. Rigid elimination diets in hospitals are seldom revealing enough to justify such an impractical and costly approach. In view of existing doubt concerning the part foods may play, it would seem more practical for patients to avoid the common allergenic foods as well as any other foods considered by the patient to be contributory.

Superficial fungous infections of the hands are so rare as scarcely to justify the common misconception that eczema of the hand is "fungous" until proved otherwise. Furthermore, in view of the fact that so-called "athlete's foot" is caused by a fungus that prefers the moist webs of toes and will seldom grow on dry skin, transmission from feet to hands does not seem logical. A diagnosis of tinea of the hands should not be made until the specific organisms are identified by direct examination or culture of skin scrapings. Unfortunately, when this disease does occur, it is highly refractive to treatment.

Secondary fungous eruptions (ids) are not rare and may result from the hematogenous spread of fungi or transmission of these toxins from foci of feet, groin, or ears. The criteria for such a diagnosis have been listed by Sulzberger and Baes[3]:

(1) There should be a demonstrable focus of primary fungous infection.

(2) Onset of eruption on the hands should follow activation or irritation of the primary focus.

(3) Eruptions on the hands should be symmetric and should occur on the sides of

the fingers, thenar and hypothenar eminences, and palms.

(4) The eruption should subside as the primary focus is controlled.

(5) Forty-eight to 72 hour tuberculin type reaction to skin testing with trichophytin should be positive.

Bacterids are similar in origin and appearance except that these lesions are more apt to be pustular. That they do occur secondary to infections of teeth, tonsils, prostate, and other organs is born out by the work of numerous investigators[10]. It is, indeed, fortunate when a dermatitis of the hands disappears or improves after subsidence of the infection or after administration of antibiotic drugs. Foci of infection probably play more of a contributing or aggravating than a causative role.

Another popular misconception is that most eczematous eruptions of the hands are due to the "nerves." Although the sweat glands play a part, their exact role in the production of eczema is not known. Hyperhidrosis results in hydration of keratin, leading to the chain of events that results in chapping. Recent studies have revealed that pompholyx, long thought to be a disturbance in sweating, is in no way related to the secretion of sweat[14]. On the other hand, dyshidrosis may be secondary to inflammation and edema of an existing dermatitis of the hands. Nevertheless, it is difficult to ignore the frequency of eczema of the hands in the emotionally unstable patient with pronounced sweating of the palms.

Treatment

Peculiarities of anatomic sites involved in dermatitis of the hands necessitate special treatment dependent upon the ambulatory state of the patient. The morbidity of the disease can be appreciated when one realizes that incapacitation from a fractured hand may last for weeks, whereas that from eczema may last for months, years, or indefinite periods, or may be periodically recurrent. The average patient with eczema of the hands who comes to the dermatologist has had his disease for two months. One possible explanation of the difficulty in treating hands is inability to obtain rest of the diseased part, whether in an ambulatory or bed patient. The hands are forever moving. Time and expense could undoubtedly be saved by hospitalization, which would permit complete immobilization, removal from usual environment, and intensive supervised dermatologic treatment.

Obviously, because soap and water play such an important role in the production of this malady, they must be eliminated. Substitutes for soap (Lowila cake, pHisoderm, Dermolate, etc.) should be used only after the dermatitis is completely controlled or at least is in the late chronic or involuting stage. Soaking or rinsing the hands in one-half per cent Burow's or two per cent boric acid solution cleanses without irritation. Oatmeal products, such as Aveeno[R], have been found satisfactory for washing hands and for bathing. When ointments are used, olive oil or cotton seed oil effectively remove the grease. It should be emphasized that cleansing should be performed gently, even at a sacrifice of thoroughness, since abrasion of irritated skin may occur so readily. Other irritants to be avoided include bleaches, polishes, solvents and allied chemicals, perfume, deodorants, hair dyes, dentrifices, plastic materials, and wool.

To avoid all possible irritants, then, some occlusive bandage must be used. Soft white cotton gloves not only serve as suitable bandages but protect against further contact with irritants. They should be reversed to prevent the rubbing action of the seams. By their use, a sense of consciousness of touch is created whereby patients become familiar with the casual contacts of the hands. For wet work, rubber gloves may be used; they should be either lined or worn over cotton gloves, since contact with rubber may produce sensitization and increase sweating. For this reason, they should not be worn longer than 15 to 20 minutes at a time. Theoretically, protective creams and ointments would appear to serve as prophylactic agents for contact dermatitis. Covicone cream, Silicote and Dermadex are among those in use. Unfortunately, for some reason, possibly improper use, these agents are of little help, and in some cases sensitivity to them has developed.

Since eczema of the hands is so intimately related to the patient as a whole, general

supportive measures are necessary in its treatment. Systemic deficiencies, such as anemia, thyroid disease, focal infections and the like, should be corrected, and advice should be given concerning limitations of use of the hands (exercise, work, hobbies, etc.), diet. amount of sleep, rest, and relaxation. Chronic pruritic dermatitis undoubtedly produces a "nervous" state, which in turn aggravates the dermatitis. Emotional crises should be avoided as much as possible; it is often advisable to counsel the marital partner in this regard. Use of stimulants, such as coffee and tea, should be curtailed. Alcohol, through its warming action, may cause pruritus. Excesses of pleasure or grief may induce an exacerbation of eczema; this may explain the flare-ups after attendance at stimulating movies, plays or games. If sedation is indicated, chloral hydrate is preferred to the barbital drugs, since the latter may themselves create allergic reaction of the hands or aggravate an existing dermatosis. Antihistaminic drugs, especially Benadryl, may produce a side reaction of sedation and are often sufficient. Recently, relaxation has been achieved with the Rawolfia drugs combined with antihistamines (Sandril with pyronil, Lilly). Actually, antihistamines have little specific effect on the course of eczema aside from allaying pruritus in the acute exudative stage in a small percentage of patients and, certainly, they do not shorten the course of the disease process itself. They are seldom of local benefit and occasionally cause sensitization. Finally, the damage resulting from scratching, rubbing and picking at the diseased skin must be impressed upon the patient. Emersion of the hands in ice cold water may not be as satisfying as the sensation derived from scratching, but it will avoid trauma that may delay healing or actually produce exacerbation. Once the patient succumbs to the urge to rub or scratch, he cannot interrupt the process until orgasm is complete. Paroxysms of pruritus may be brought on insidiously by touching rough material, by cotton fibers sticking to the skin, by rubbing the hands together, or by handshaking, radiant heat, and the like. Habitual scrutiny of the diseased parts or their display to friends and relatives may result in a sympathetic response leading to liberation of histamine and production of pruritus. This may be avoided by use of bandaging.

As in other chronic or recurrent diseases of nonfatal import, systematic administration of steroids is contraindicated in the treatment of eczema of the hands except to combat threatened dissemination or for abortion of a threatened exacerbation. In the acute stage of an exudative process, ACTH Gel may be used for three to five days as an adjunct only.

When pyoderma exists and is not controlled by local therapy, as in existing or impending cellulitis, antibiotic drugs are indicated. Penicillin should be avoided because of its tendency to produce allergic reactions (and most eczematous patients are allergic reactors), and because of its ability to activate dormant tinea and monilial infestations. Triple sulfonamides have been found to control such low grade infections with fewer untoward reactions. Radiation with ultraviolet or with roentgen rays is helpful in the chronic stage of eczema of the hands but should be given only by qualified specialists in dermatology.

Local Treatment

As in the topical treatment of dermatitis of other anatomic sites, the basic sound principles of dermatologic topical therapeutics should be employed for the hands, wherein proper treatment is chosen for the acute, subacute, and chronic stages of dermatitis. In the *acute* stage, cool wet dressings of one-half per cent Burow's solution or two per cent solution of boric acid should be applied continuously until the exudative process subsides. A housewife may perform her chores by using compresses on one hand for 30 minutes and covering the "free" hand with a bland lotion, such as calamine, or with an absorptive paste, such as Lasser's. In the presence of coccogenous or fungous infection, it may be advisable to use compresses of potassium permanganate, 1:10,1000, bichloride of mercury, 1:4000, or eau d'alibor, one-half per cent. As a rule, compressing with eight to 12 thicknesses of loose mesh gauze is preferable to emersion of the hands in a vessel of solution because the pressure

of the gauze affords some relief of pruritus and renders a sense of security or protection to the patient by occlusion. When compressing is to be continuous, periodic exposure to the air for drying, to avoid undue maceration, is advisable for a period of 15 minutes every two to three hours. As the acuteness of the exudation subsides, paste may be tolerated as a dressing at night.

In the subacute stage, when profuse exudation has ceased, lotions, powders, or pastes are indicated. Calamine lotion, with or without one-half to one per cent phenol, may be used or, if this medicament is too drying, a topping of a bland ointment, such as five per cent boric acid in rose water ointment, may be applied over the powder. Recently, hydrocortisone (acetate or alcohol) has been used advantageously in the subactue stage, either as a one per cent proprietary lotion or incorporated in a paste in the same percentage. Here again, it is important to choose a vehicle to fit the particular stage of dermatitis. These preparations are marketed in lotions (acute stage), creams (subacute stage), and greasy ointments (chronic stage). Most dermatologists prefer to have these drugs compounded by prescription so that they may choose the vehicle and incorporate whatever additional medicaments are indicated. It has been found that an antibiotic drug, preferably neomycin, augments the anti-inflammatory action of hydrocortisone. Such a prescription is:

Hydrocortisone (alcohol or acetate)	0.3
Neomycin	0.12
Aquaphor or Acid mantle cream or Petrolatum qs.	30.0

Indeed, the steroid preparations for topical therapy have revolutionized the treatment of localized eczematoid states, especially in the case of infectious eczematoid dermatitis. Their range of usage can be increased through the addition of certain chemicals long known for their specific topical effect, as in the case of vioform for seborrhea and low grade coccal or monilial disease; liquor carbonis detergens for its keratoplastic action in psoriasis; salicylic acid for its keratolytic effect in hyperkeratotic lesions; neomycin or other antibiotic agents for pyoderma; and ammoniated mercury for parasitic infestations, including tinea.

Summary

The subject of eruptions of the hands is of such magnitude as to constitute a subspecialty of dermatology. The protean features of this group of diseases is summarized to give the general practitioner a workable classification and a detailed outline of its modern treatment.

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Elect Officers

New officers elected recently for the Society of Neurologists and Psychiatrists are Harold Binder, M.D., Oklahoma City, President; Felix Adams, M.D., Vinita, Vice-President and President-Elect; Charles Smith, M.D., Norman, Secretary-Treasurer; and Robert L. Imler, M.D., Tulsa, named to the Executive Board.

Guest speakers at the meeting, which was held at the Mayo Hotel in Tulsa, were Doctor George Stevenson and Doctor Jensen of Wisconsin.

Medical Grand Rounds

NATURAL HISTORY *of* PEPTIC ULCER

STEWART WOLF, M.D., CLAIR LIEBRAND, M.D., STANLEY COFFIN, M.D. and ROBERT STOVER, M.D.

Stewart Wolf, M.D.: Two representative patients with duodenal ulcer will be presented today, and then from a consideration of the individual cases we will proceed to a discussion of the natural history of duodenal ulcer and its complications. Doctor Coffin, will you tell us about the first patient?

Stanley Coffin, M.D.: This is a 20 year old married male stock clerk whose chief complaint is intermittent epigastric pain of four years duration.

Present Illness: The patient, who is the oldest of eight children, describes himself as tense, nervous, sensitive, ambitious, and slow to anger. When he was six years old his father underwent a brain operation and since then has not worked, so his family has been forced to depend upon public welfare. The patient said that this upset him greatly as a child and he felt that it set him apart from other people. At the age of 16, partly because of poor family finances and partly because of resentment against his father, whom he described as demanding and domineering, the patient left home and went to live with his grandmother and her fourth husband. He found this situation preferable to his former home although here he was required to work for his board and room. His grandmother often scolded him and compared him to his father, and her husband frequently teased the patient in a humiliating way. Nevertheless, the patient felt indebted to the grandparents and therefore bore their ill treatment without protest. At about the time he moved in with his grandmother he began to note epigastric discomfort whenever he was hungry. After about a year this sensation became definitely painful and localized to the epigastrium in the midline. It occurred usually in the afternoon and was aggravated by carbonated drinks and coffee and relieved by milk or alkalies. This pain occurred once or twice weekly and occasionally caused him to stop working. Approximately concurrent with his marriage two years later to an ordained minister and with the undertaking of a new job with added responsibilities, the patient noted increased frequency and intensity of his abdominal pain. Six months prior to his admission to the hospital his wife became ill with preeclampsia, and a series of other mishaps plunged him deeply into debt. At this time he began to have pain at night and excessive fatigue so that he gave up his work. He became increasingly preoccupied about his financial difficulties, seeing no way out except for his wife to go to work. Since she had given up her ministerial career to marry him he was unwilling for her to work to support the family.

THE AUTHORS

Doctor Wolf is professor and Head of the Department of Medicine, University of Oklahoma Hospitals. Doctor Liebrand is a resident in medicine, and Doctors Coffin and Stover are interns.

Past History: The patient's past history was essentially non-contributory.

Family History: The patient's father, two of the father's uncles, and an elder

brother of the father all have typical symptoms of peptic ulcer.

Systems Review: Essentially negative.

Physical Examination: Temperature, respirations, and blood pressure were normal, pulse was 100. The patient was a thin, tense young man but in no obvious distress. The physical examination was entirely normal save for moderate tenderness in the right lower quadrant of the abdomen.

Laboratory: Admission laboratory studies revealed 5,300,000 red cells and hemoglobin of 10 grams. White blood count and differential were normal. Stool was negative for occult blood and urinalysis revealed no abnormality. Gastric analysis revealed a fasting specimen of 120 cc with 40 degrees free acid and 55 degrees total acid. Chest x-ray was normal. Upper gastrointestinal series showed marked scarring of the duodenal bulb with an ulcer crater present, and after one hour there was 90 per cent gastric retention.

Course: The patient was placed at bed rest, given a bland diet with milk and cream between meals, and put on tincture of belladonna, 10 drops before each meal. As his symptoms subsided he became more cheerful and gained three pounds in weight, but he continues to be unable to formulate adequate plans for the future.

Robert Stover, M.D.: The second patient is a 61 year old white male laborer.

Chief Complaint: 1. Long standing epigastric pain.

2. Vomiting of blood and passing of tarry stools for three days prior to admission.

Present Illness: For the past five years the patient had noted epigastric pain after meals, bloating and belching, usually relieved by alkalies and never disabling. Three days prior to admission the patient had his first episode of severe epigastric pain followed by severe nausea and vomiting of dark blood. Subsequently he estimated that he vomited about a quart of bright red blood and noted that his stools had turned very black. The hematemesis gradually subsided but the black stools continued and the patient sought admission to this hospital.

Past History: The patient had bilateral ankle deformities since birth, reduced hearing dating from bilateral ear infections in childhood, bilateral inguinal herniorrhaphy in 1940 and hemorrhoidectomy in 1945 at University Hospital. At that time auricular fibrillation was discovered. Five years later he began to note exertional dyspnea, fleeting precordial pain radiating to the shoulder, and finally ankle swelling two months prior to his present admission.

Family History: Essentially non-contributory.

Systems Review: Essentially non-contributory.

Physical Examination: T. 98.6; R. 20. The pulse was irregular with an apical rate of 130 and radial of 80. The patient was a well developed, moderately obese white male in no apparent acute distress. He was ambulatory. There were bilateral perforations of the tympanic membranes with purulent discharge in each external auditory canal. Auditory acuity was markedly reduced bilaterally. The heart was slightly enlarged to the left, the rhythm was auricular fibrillation. No murmurs were heard. Examination of the abdomen revealed no pain or tenderness and no abnormal masses. Rectal examination revealed tarry feces within the ampulla. There was bilateral clubbed foot and varicose veins in both legs. The remainder of the physical examination was unremarkable.

Laboratory: Urine analysis was normal. Blood count revealed 3,600,000 red cells with 9 grams of hemoglobin and 32 per cent hematocrit, and the white blood count was 12,200 with normal differential. Stool examination was strongly positive for blood. Blood non-protein nitrogen was 67 mg per cent and other blood chemistries were within normal limits.

Course: On a regimen of bland food, tincture of belladonna, phenobarbital, ferrous sulfate, and one pint of blood, the patient quickly became asymptomatic. X-rays revealed a deformity of the duodenal bulb with an ulcer crater. His stools became negative

for blood, his NPN fell to normal, and after four weeks he remains asymptomatic, but x-rays show the ulcer to be still present.

Doctor Wolf: The cases presented illustrate many typical features of peptic ulcer disease. In the first, the fundamental, probably partly unconscious attitude of feeling insufficiently loved and supported which is dealt with by a strong drive to seem indepent and self-reliant is clearly brought out. The situation which correlated with his present flare-up, in which he felt trapped by the need to be dependent on his wife, must have gained force from its similarity to the earlier traumatic situation vis-a-vis his grandparents.

In the second patient, the critical importance of the bleeding problem has taken precedence over the investigation of the patient's personality development, attitudes and life experiences. Both patients have had symptoms for approximately the same time. The first is a so-called simple case, while the second illustrates a complication of ulcer disease, namely bleeding.

To judge the likely future course of the individual patient with duodenal ulcer. we turn to statistics. However, medical "statistics" are rarely gathered and published in such a way as to satisfy a professional biostatistician. Thus the available data in the literature on such a subject as natural history of peptic ulcer are inconclusive, confusing and often conflicting. Doctor Liebrand has attempted, with full allowance of a margin for error, to pull together figures from several current sources* into a more or less coherent statement.

Peptic Ulcer is a Very Common Disease

Ivy et al have analyzed the various reports on the autopsy incidence of peptic ulcer in all its forms and conclude that it has ranged from five to 10 per cent of the total population above 15 years of age. X-ray material has yielded comparable figures. In any given 10 year period 2.4 per cent of the population over 30 years of age will have peptic ulcer, and in any single year one to three per cent of the population over 20 will have an ulcer. Approximately two in every 1000 people over 20 are hospitalized for ulcer therapy each year in the United States. In any 10 year period it is said that there are 1,500,000 cases of peptic ulcer and that 375,000 visits to doctors are made each month because of ulcer symptoms. Of these cases the incidence of duodenal to gastric ulcers ranges in different series from 1.2:1 to 17:1.

Correlation With Sex, Age, And With Other Diseases

Both sexes and all ages are, of course, susceptible to peptic ulcer; but it is now generally agreed that the incidence in males is about four times that in females, and that the peak incidence is in the fourth decade for duodenal ulcer and in the fifth for ulcers of the stomach. Ideas formerly held concerning predisposition according to the constitutional type, occupation, familial tendency, etc. generally are not borne out by statistics. The same may be said regarding any supposed relationship of peptic ulcer to other diseases; statistically significant increased incidence of ulcer does not occur with any specific disease save for Curling's ulcers with burns and Cushing's ulcers with central nervous system diseases, including malignant hypertension with encephalopathy. Patients with pernicious anemia and combined systems disease, by virtue of achlorhydria, are of course protected from the development of ulcer; and there appears to be a decreased incidence in pregnancy and in patients with extensive atrophic gastritis.

"Once an Ulcer Patient Always An Ulcer Patient"

While the duration of illness may last from a few days to many years, the average stated duration in most statistical studies is from five to eight years. During the period of symptoms, 20 per cent of patients may expect fairly continuous symptoms from duodenal ulcer; in 80 per cent the symptoms will be periodic. The duration of individual bouts averages about two to three months; but the symptom-free periods become more infrequent and shorter as time passes. For a given episode of ulceration, conservative medical treatment of the standard type may be expected to produce symptomatic relief in 90-95 per cent of patients and healing of the ulcer within six to eight weeks. As regards the longer course, there is a wide range

of incidence of recurrences in various reports; but the duration of symptom-free periods as compared with periods of exacerbation is sufficiently long in approximately 80-85 per cent of cases to justify considering medical management satisfactory. Nevertheless, the majority of patients may be expected to have a recurrence of ulcer symptoms eventually. Figures on this vary from those of Kiefer, who in 1932 reported that in a series of 392 patients nine per cent had recurrences in one year and 46 per cent within five years, to those of Emery and Monroe, who observed 59 per cent and 93 per cent of recurrences respectively after one and five years of observation of 1435 patients. There is no evidence that the risk of recurrence under medical management decreases with the passage of time.

The Need for Surgery

Currently, approximately 15 per cent of patients with duodenal ulcer are operated on and approximately half of those have more than one complication when they undergo surgery. Of the complications requiring surgery, intractability does not lend itself to statistical evaluation. The following are selected statistics regarding the other complications for which patients with duodenal ulcer are operated on.

Perforation is the justification for 10 to 15 per cent of operations, and one-fourth of the patients requiring surgery for perforation have not had previous "ulcer" symptoms according to Portis. Approximately 98 per cent of perforations occur in males. Prior to the use of antibiotics it was the most dangerous of the complications and accounted for 85 per cent of deaths from duodenal ulcer. In DeBakey's series of nearly 8000 cases published in 1940 the mortality rate was 10.5 per cent in patients operated within six hours of the perforation and 62 per cent in patients whose operation was delayed for 24 hours or more. Following recovery from operation for perforation, 65 to 85 per cent of patients will have recurrence of ulceration and one to five per cent will perforate again.

Association of Perforation With Bleeding

It was formerly said that bleeding ulcers do not perforate and perforating ulcers do not bleed: this is still believed by Sandweiss, but Ivy says that hemorrhage accompanies perforation in six per cent and Portis states that 10 per cent of the series of 360 perforations reported by Winters and Egan occurred in patients whose ulcers had bled.

Incidence of Bleeding

According to Portis, 20 to 25 per cent of people with peptic ulcer experience massive hemorrhage at some period, and 72 per cent of all severe hematemesis and melena is ascribable to bleeding peptic ulcer. Hemorrhage may be the initial symptom in 15 per cent, but in one series of 230 cases as many as 6.5 per cent of ulcer patients with hemorrhage had had symptoms for more than 30 years. The mortality rate from hemorrhage varies chiefly with the volume and rate of blood loss, the timing of surgical intervention, the age of the patient, and the degree of arteriosclerosis present. Seventy-eight per cent of deaths from hemorrhage are from the first hemorrhage, but 26 to 50 per cent of patients will bleed more than once. According to Portis' figures the mortality rate does not increase with each succeeding hemorrhage. Ivy's figures, on the other hand, indicate that it does, especially with recurrences of bleeding within 72 hours of the initial hemorrhage.

Obstruction is Often Reversible Without Operation

Although some degree of gastric retention is said to occur in 25 to 30 per cent of patients with duodenal ulcer, in only eight per cent of these is there obstruction due to actual stenosis, the remaining 92 per cent being due to spasm and/or edema. If obstructive symptoms persist as long as three months, 69 per cent of patients will require surgery, whereas only 39 per cent will require operation for obstruction of less than three months duration.

Results of Surgery

The results of surgical treatment are best evaluated in Dr. Sara Jordan's Report of the Chairman of the Subcommittee on Surgical Procedures in Peptic Ulcer of the American Gastroenterological Association. This reports 2764 cases of ulcer treated surgically,

and of these 1144 underwent gastric resection. Of the total number, 2441 were duodenal ulcers, and there were 1036 duodenal ulcers in the group on whom resections were done. The data are tabulated below and are self-explanatory, save to say that the criteria used for evaluation of cure are: 1) clinical freedom from ulcer symtoms, 2) satisfaction with operation, 3) ability to work or perform usual duties, 4) absence of recurrent ulcer by roentgenogram, and 5) absence of hemorrhage in post-operative follow-up.

It is important as reported by Moyer that the surgical mortality rate for gastric resection varies from less than two per cent in clinics where there are surgeons who perform the operation almost daily to as high as 40 per cent in smaller hospitals across the country where the surgeon performs only a few gastric resections a year. If enough of the stomach is removed the likelihood of subsequent ulcer, either at the original site or in the stoma, is extremely small. The surgical failures, aside from operative mortality, include the dumping syndrome, which is said by Portis to occur in from 2 to 5 per cent, and impaired nutrition due to decreased fat absorption, which has been reported in as high as 40 to 45 per cent of cases treated by gastric resection but is of clinical significance in a much smaller percentage.

In conclusion, it is worthwhile to quote Dr. Walter Palmer who in his discussion of the results of treatment of peptic ulcer in PORTIS says, "Statistical evaluation of the results obtained is of little value, for the results depend on the location and size of the lesion—together with the complications present; on the patient's willingness and ability to cooperate, and on the physician's knowledge, personality, tact, enthusiasm, persistence, resourcefulness and painstaking care in the management of the case at hand. As a rule, however, the treatment of ulcer may be undertaken with cautious confidence regarding both the initial lesion and the prevention of recurrences. Difficulties result mostly from the persistence after healing of the hypersecretion of duodenal ulcer, which predisposes toward recurrence. Nevertheless, in few chronic diseases are the results more definite or more gratifying."

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RESULTS OF SURGERY

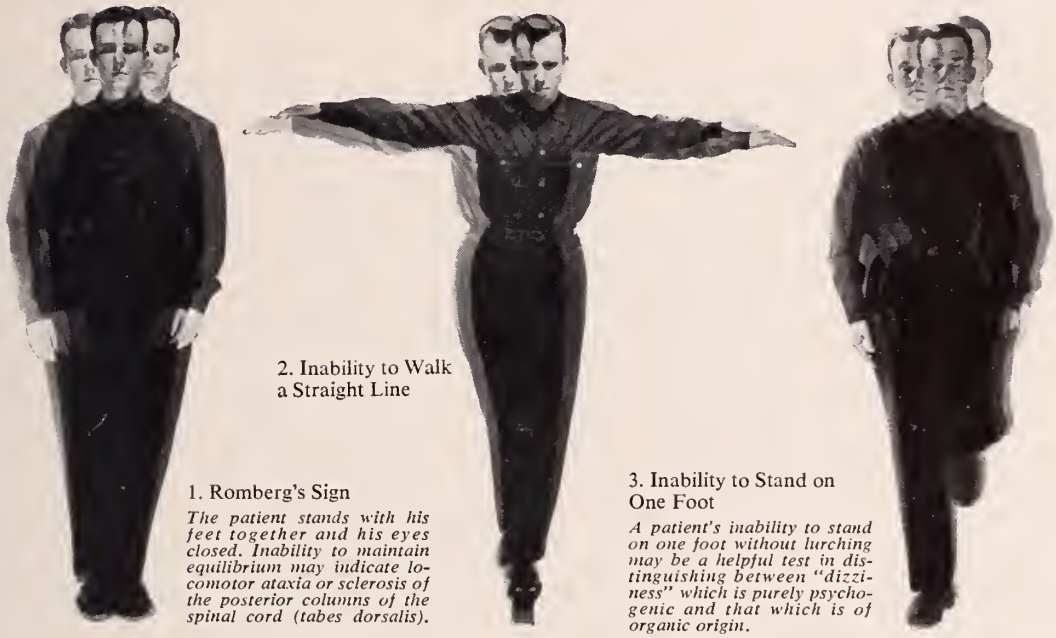
Report of the Chairman of the Subcommittee on Surgical Procedures in Peptic Ulcer of the American Gastroenterological Association.

	Satisfied with Operation	Symptom-Free	Combined Criterio for Cure	Recurrence on X-ray	Mortality Rate	Hemorrhage in Follow-up Study
WITHOUT PREVIOUS HEMORRHAGE						
Gastric Resection	93.9%	95.6%	86.2%	1.6%	2.5%	4.3%
Gastric Resection plus Vagotomy	96.9	96.8	87.2	1.3	2.2	1.3
Gastro-enterostomy plus Vagotomy	94.0	71.7	80.3	2.4	1.4	2.1
WITH PREVIOUS HEMORRHAGE						
Gastric Resection	91.5	96.4	87.3	2.2	5.4	8.6
Gastric Resection plus Vagotomy	94.8	96.1	85.0	1.4	1.4	4.3
Gastro-enterostomy plus Vagotomy	93.2	83.8	75.0	3.6	1.0	6.5

DRAMAMINE® IN VERTIGO

Notes on the Diagnosis and Management of "Dizziness"

II. False Dizziness



2. Inability to Walk a Straight Line

1. Romberg's Sign

The patient stands with his feet together and his eyes closed. Inability to maintain equilibrium may indicate locomotor ataxia or sclerosis of the posterior columns of the spinal cord (tabes dorsalis).

3. Inability to Stand on One Foot

A patient's inability to stand on one foot without lurching may be a helpful test in distinguishing between "dizziness" which is purely psychogenic and that which is of organic origin.

False dizziness is a sensation of sinking or lightheadedness which is often of psychogenic origin. It should be distinguished from true "dizziness" or vertigo[1] in which there is a definite whirling, moving sensation.

Unsteadiness, lightheadedness and similar manifestations of false dizziness[2] may be psychogenic or the result of arteriosclerosis, hypoglycemia, drug sensitivity and general metabolic disturbances such as anemia and malnutrition. Hypertension is often the cause of these symptoms.

Psychogenic dizziness probably originates at the highest brain centers. It may be described as a sense of uncertainty with occasional mild lurching but not to the point of falling. In these patients there is no nausea, no disturbance of vestibular pathways and otologic and neurologic examinations are negative. The sensation is unaffected by head movement. Symptoms usually disappear[3] with complete rest.

Dramamine® has been found highly effective in many of the conditions already mentioned. Maintenance therapy with Dramamine will often keep the patient from becoming incapacitated by his condition.

Dramamine is also a standard for the management of motion sickness and is useful for relief of nausea and vomiting of fenestration procedures and radiation sickness and for relief of "true dizziness" of other disorders.

Dramamine (brand of dimenhydrinate) is supplied in tablets (50 mg.) and liquid (12.5 mg. in each 4 cc.). G. D. Searle & Co., Research in the Service of Medicine.

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SEARLE

Association Activities

PRESIDENT'S LETTER

On June 19, 1955, the communities of Cushing and Drumright honored one of their citizens as few men are honored. Here some 2000 citizens gathered in the local park with basket lunches, food enough for twice the number. Following the picnic type dinner, a planned two hour program of "This is Your Life" gave a panoramic view of the life of their family doctor for 40 years, former president of the Chamber of Commerce, former president of the local school board, past president of the County Medical Society, a member of the Salvation Army Board for 25 years, member of the India Temple Shrine, a civic leader in every phase of activity for good and many many other progressive enterprises. This citizen is Dr. Orange W. Starr who in 40 years of service in these communities has endeared himself to the citizenry in such a way that one could not be criticized for being envious of such endearment.

One of the most emphasized features of the program was the return and attendance of many "Starr Brand Babies". Doctor Starr in his general practice has delivered 3,230 babies, not including a baby colt some 30 years ago which was in attendance to share in the honoring. The first "Starr Brand Baby", age 40, returned from Texas to share in the program. The youngest "Starr Brand Baby" was also there, a two month old baby girl.

The Indians showed their love for Doctor Starr by doing various tribal dances. One Indian chief who was in Doctor Starr's company during World War I gave a vivid description of how Doctor Starr, while in England, had him take white boys, paint them as Indians and give Indian dances for the King and Queen of England.

The colored people did quite appropriately well. The Horseman's Club of which Doctor Starr is an active member was much in evidence.

For two hours, the above and many other organizations and individuals showed such devotion and respect that one would have to see to believe.

So what, you say? If every M.D. in Oklahoma and every other state had the love, respect and admiration of his community as Doctor Starr has, medical legislation would be unheard of, socialized medicine would have never been a question and we would have a medical profession that our forefathers would look down and smile upon.

R. Q. Goodwin

President

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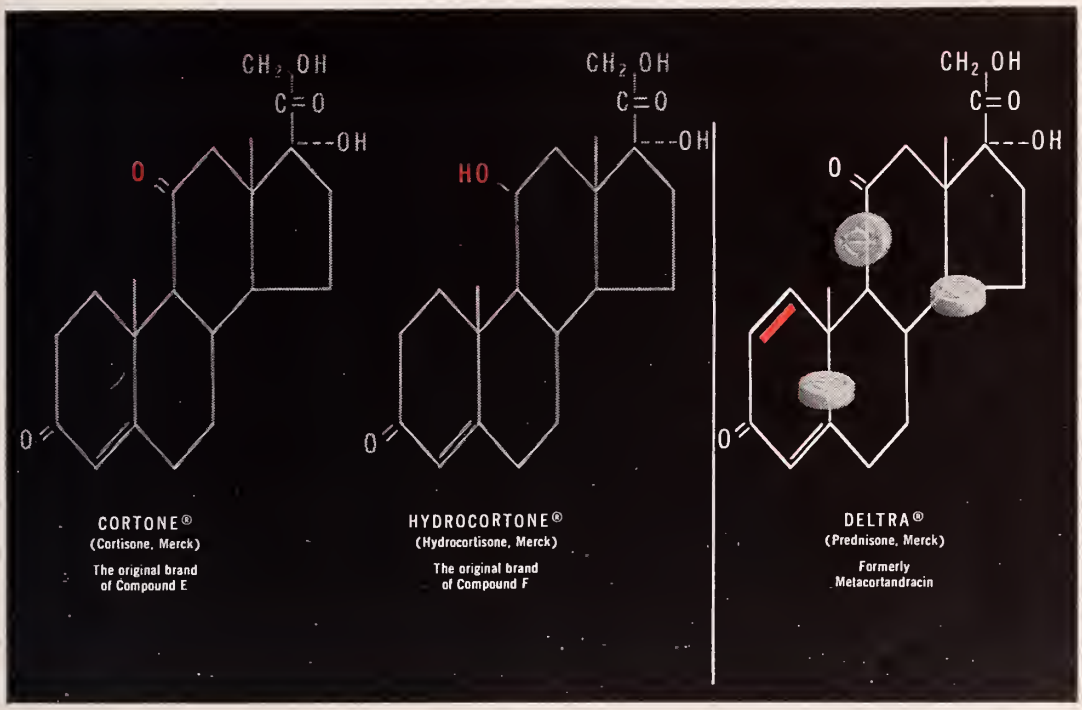

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Deaths

Felix T. Gastineau, M.D.
1889-1955

Felix T. Gastineau, M.D., Tulsa ophthalmologist, died June 30 following a heart attack at his home.

Doctor Gastineau had practiced in Tulsa for more than five years, having been director of the student health service at Norman prior to that time. Earleir, he had practiced in Pawnee and for approximately 16 years in Vinita.

He was born in Crawfordsville, Ind. and received his medical degree from the University of Oklahoma School of Medicine where he taught pathology fo ra time. He was a veteran of World War I, a Mason, member of the Presbyterian church and the Tulsa Men's Rose Club.

Charles E. Sexton, M.D.
1873-1955

Charles E. Sexton, M.D., pioneer Oklahoma physician, died June 4 in a Kansas veterans hospital.

Doctor Sexton, a founder of the Payne County Medical Society in 1905, also served in the 1909 session of the Oklahoma Legislature and during the historic 1910 special session when the state capitol was moved from Guthrie to Oklahoma City.

He was born in Fountaintown, Ind., attended National Normal University at Valpariso and did pre-medical work at Tri-State Normal in Angola, Ind., receiving his degree from what is now Indiana University Medical College, in 1898.

He came to Oklahoma in 1900 and after eight years' practice at Perkins he moved to Stillwater where he lived until 1949, when he moved to Oklahoma City.

He was a member of the Presbyterian church, 32nd Degree Scottish Rite Mason and a one time president of the Cimarron Valley Boy Scout Council.

S. A. Spann, M.D.
1882-1955

S. A. Spann, M.D., Meridian, died May 19. He was a graduate of Meharry Medical College, Nashville, Tenn.

C. L. Wellman, M.D.
1878-1955

C. L. Wellman, M.D., long time Oklahoma City physician, died June 12 at his home in Grove.

Doctor Wellman practiced in Oklahoma City from 1918 until 1947 when he retired to Grove. He was a veteran of World War I and a pioneer state resident, settling with his missionary parents near Darlington in 1889.

Doctor Wellman was born in Kansas City, Mo. and attended Oberlin College, Iowa, receiving his M.D. from Kansas University in 1901. He was a member of the Elks and Masonic lodge and the Rotary club.

Richard Dee Morris, M.D.
1886-1955

Richard Dee Morris, M.D., practicing physician in Allen and vicinity for more than 40 years died at an Ada hospital May 13 following a long illness.

He graduated from medical school in Arkansas in 1912.

Charles Hamilton McBurney, M.D.
1881-1955

Charles Hamilton McBurney, M.D., Clinton physician for almost 50 years, died May 18 of cancer. He had been ill for several years.

Doctor McBurney was born in Marion County, Iowa, in 1881 and came to Oklahoma in a covered wagon with his father in 1893. He attended Central State College, Edmond, and graduated from Kansas University School of Medicine in 1907.

He was a veteran of World War I, a member of the American Legion, and the Masonic lodge.

S. S. Mohrman, M.D.
1878-1955

Silas S. Mohrman, M.D., died at his home in Tulsa May 22 of cancer after a four month illness.

Doctor Mohrman practiced in Tulsa from 1907 until he became ill. He was born in Greenfield, Ill. and graduated from St. Louis College of Physicians and Surgeons in 1906. He was a veteran of World War I, a Mason, member of the Methodist Church, American Legion and several medical organizations.

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Certificate Presented To Resident in GP

In ceremonies in Oklahoma City at University Hospital, Victor Moore, M.D. received a certificate signifying the completion of a year of residency at University hospital on a $1,000.00 Mead Johnson scholarship.

Doctor Moore received the grant for general practice residency work a year ago and was one of 10 doctors selected for the awards over the country.

M. B. Glismann, M.D., Oklahoma City, chairman of the American Academy of General Practice committee which selects the recipients of the award, presented the certificate at a quarterly staff dinner meeting at University Hospital.

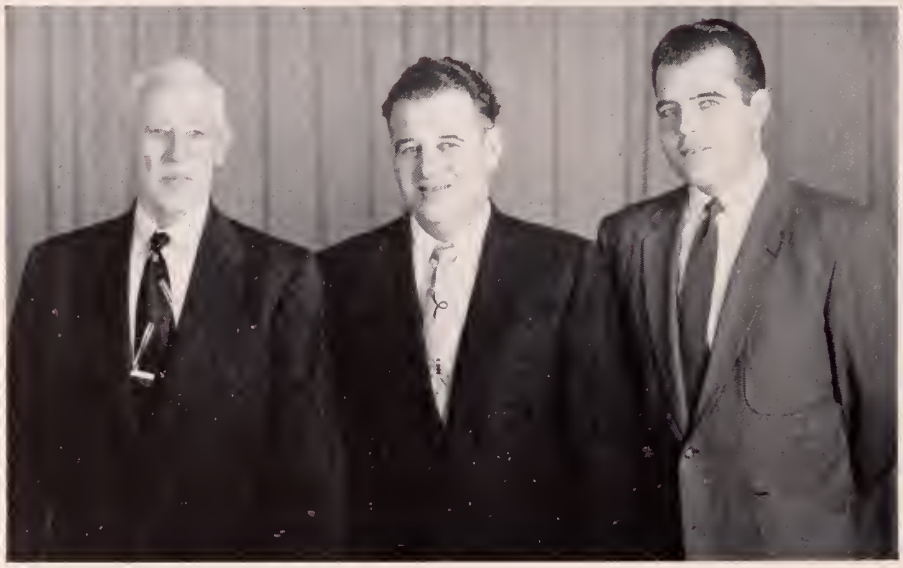
Receive Blue Cross-Blue Shield Award

James Crabtree, Clinton, and George Haddad, Sand Springs, were first and second place winners of the essay contest for Oklahoma sponsored by the Blue Cross and Blue Shield Plans.

Title of the essay was "A Medical Student Looks at Blue Shield." Mr. Crabtree's winning essay appears on the second editorial page of this issue of the *Journal.*

Each state was asked to participate in the contest, which was national, but to be eligible for the national contest, each state was required to have a minimum of 12 entries. As Oklahoma had only four entrants, it was not eligible for the national competition but first and second place awards of $50.00 and $25.00 bonds were presented. Presentation of the awards was made by John F. Burton, M.D., Oklahoma City, at the House of Delegates session in Tulsa May 8.

Three Generations of Physicians



The Doctors LeHew

Pictured above are three generations of physicians who have the same names. They are, left to right, John Leslie LeHew, Sr., M.D., Pawnee; John Leslie LeHew, Jr., M.D., Guthrie; and John Leslie LeHew, III, M.D., a 1955 graduate of the University of Oklahoma School of Medicine. The senior Doctor LeHew was born in 1868 and was graduated from Kansas City Medical School in 1897. Doctor LeHew, Jr. was born in 1901 and was graduated from the University of Oklahoma School of Medicine in 1927. Doctor LeHew, III, who was born in 1930, will begin his internship July 1 at the Bremerton Naval Hospital, Bremerton, Wash. He will serve another two years with the U. S. Navy.

— 10TH ANNUAL REPORT —

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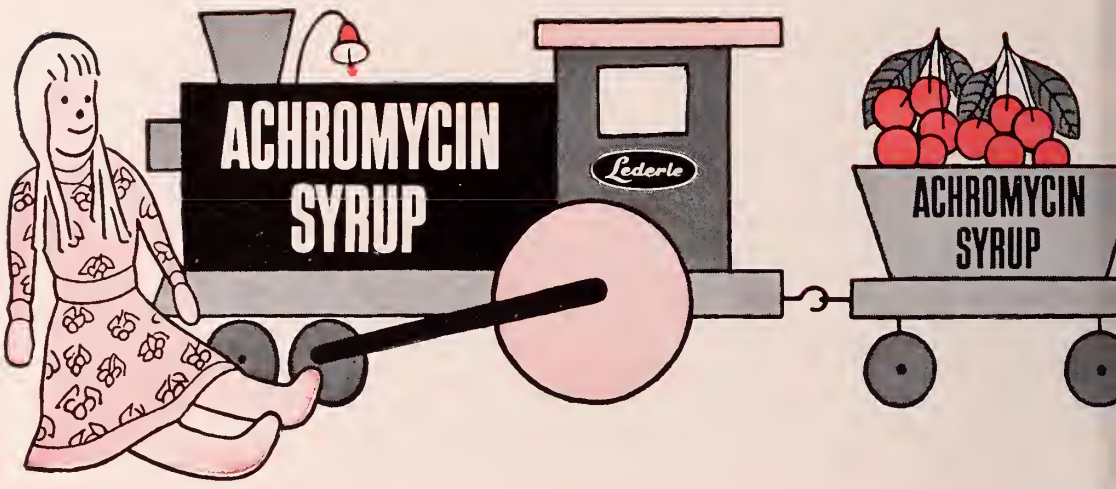

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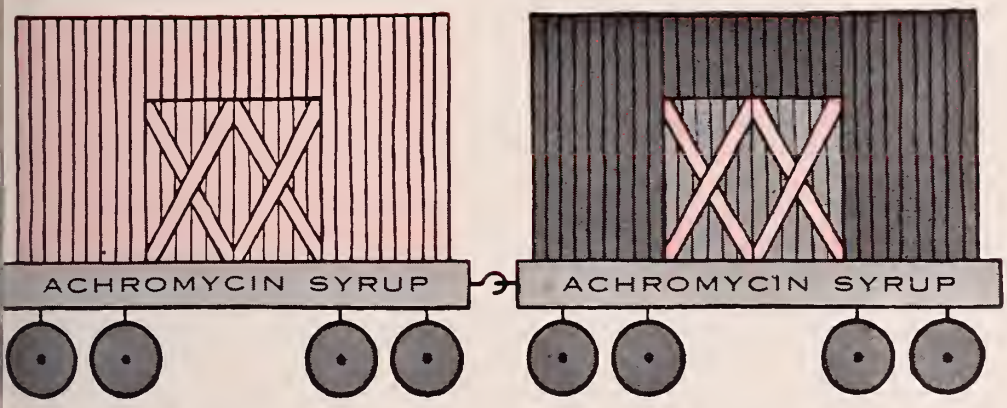

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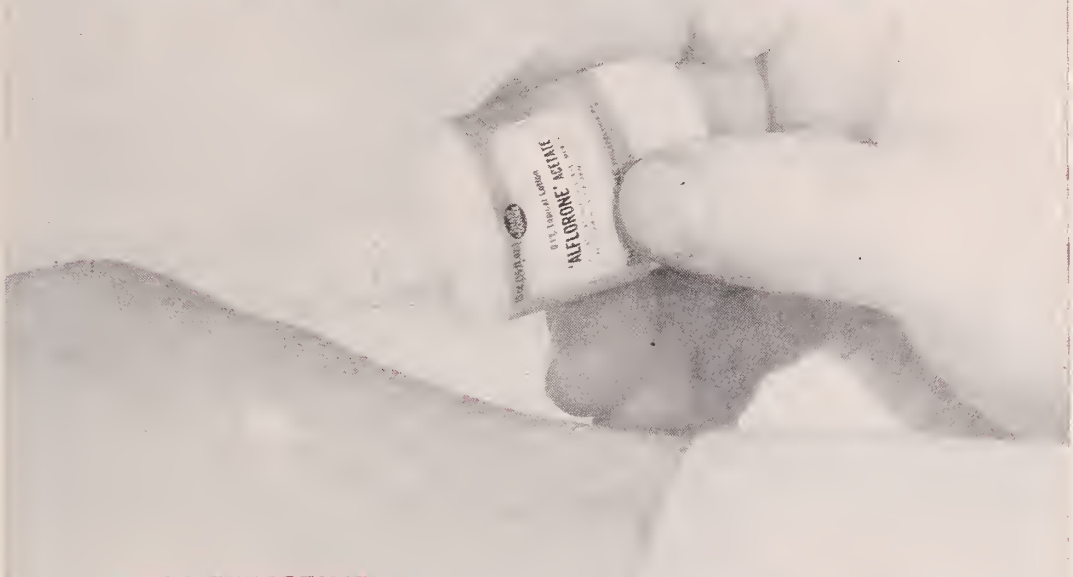

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BARTLESVILLE PHYSICIAN HONORED BY MEDICAL SOCIETY

Kieffer Davis, M.D., medical director of Phillips Petroleum Company, Bartlesville, was honored by the Washington—Nowata County Medical Society in recognition of his recent installation as national president of the Industrial Medical Association. Some 60 members and guests attended the event at Hillcrest Country Club.

Pictured at top left to right, Paul Endacott, President of Phillips Petroleum Company; Doctor Davis; Gentry Lee, chief counsel and Vice-President of Cities Service Oil Company; C. L. Johnson, M.D., local consulting physician for Cities Service Oil Company; and Lloyd Lynn, Vice-President and Treasurer of Cities Service Oil Company.

Seated at the table left to right are R. Q. Goodwin, M.D., President of the Oklahoma State Medical Association; Doctor Davis; H. E. Denyer, M.D., chairman of the Public Relations Committee of the Washington—Nowata Medical Society; John Cronin, President of the First National Bank of Bartlesville; Orville Grigsby, M.D., President of the Washington—Nowata Society.

In the group picture, first row, left to right, B. F. Buff, T. H. Davis, M.D., Tulsa; John Marshall, Paul Endacott; Doctor Davis, John Cronin, D. M. Tyler, Wm. H. Shipman, M.D., second row, Orville Grigsby, M.D., Nowata, Mark Holcomb, M.D., Enid, F. S. Etter, M.D., H. C. Price, R. Q. Goodwin, M.D., Oklahoma City, G. F. Hill, Nowata, John Dugan, Nowata, F. E. Zeeh, Gentry Lee, A. J. Mahoney, Nowata, Harley Prentiss, M.D., Nowata, third row, Lloyd Lynd, Phil Phiilips, H. E. Denyer, M.D., Rufus Bradford, Sergei Aruntunoff, and George Lee, Nowata. All are from Bartlesville unless otherwise designated.

OFFICIAL PROCEEDINGS OF THE HOUSE OF DELEGATES OF THE OKLAHOMA STATE MEDICAL ASSOCIATION

First Session

The 62nd Session of the House of Delegates of the Oklahoma State Medical Association was called to order at 1:00 p.m., Sunday, May 8, 1955, in the Ivory Room of the Mayo Hotel, Tulsa, Oklahoma, by the Speaker of the House, Clinton Gallaher, M.D.

Charles Green, M.D., Lawton, Oklahoma, gave the Invocation.

The Speaker announced that the following Reference Committees had been appointed:

Credentials Committee

Marshall O. Hart, M.D., Tulsa, Chairman
C. M. Hodgson, M.D., Kingfisher
C. Riley Strong, M.D., El Reno

Resolutions Committee

A. T. Baker, M.D., Durant, Chairman
J. D. Shipp, M.D., Tulsa
A. L. Johnson, M.D., El Reno

Sergeants at Arms

H. V. Schaff, M.D., Holdenville
W. W. Cotton, M.D., Poteau

Tellers

M. E. Robberson, M.D., Wynnewood
Berget H. Blocksom, M.D., Tulsa
M. H. Newman, M.D., Shattuck

Constitution and Bylaws

E. H. Shuller, M.D., McAlester, Chairman
Onis Hazel, M.D., Oklahoma City
B. C. Chatham, M.D., Chickasha

The Credentials Committee reported that a quorum was present.

Doctor Gallaher announced that there were a number of honored guests present and introduced the following:

Mrs. George Garrison, Oklahoma City
Treasurer to the Woman's Auxiliary to the A.M.A.
Mrs. Louis K. Hundley, Pine Bluff, Arkansas
President of the Auxiliary to the Southern Medical Assoc.
Mrs. W. R. Cheatwood, Duncan, Oklahoma
President of the Woman's Auxiliary to the Oklahoma State Medical Association
Mr. C. P. Loranz,
Advisor and Public Relations Counselor to the Southern Medical Association
N. D. Helland, Tulsa, Oklahoma,
Executive Director of Blue Cross and Blue Shield.

The Speaker recognized John F. Burton, M.D., Oklahoma City, Delegate to the American Medical As-

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sociation. Doctor Burton explained a recent Essay Contest held by Blue Cross and Blue Shield for medical students on the subject of prepaid hospitalization insurance. He presented the first award, a $50.00 bond to Mr. James Crabtree of Clinton and the second prize, a $25.00 bond to Mr. George Haddad, Jr., Sand Springs.

At this time the chair recognized Mr. Paul Compton, Treasurer and President-Elect of the Oklahoma Chapter Student American Medical Association, who spoke a few words of appreciation to the Oklahoma State Medical Association for their help in organizing and promoting their chapter and explained the aims and purposes of the organization.

This concluded the introduction of guests.

The Speaker requested the pleasure of the House with regard to the reading of the minutes of the last meeting.

Malcom Phelps, M.D., El Reno, moved: "That we dispense with the reading of the minutes as they had been published in the Journal." R. Q. Goodwin, M.D., seconded. Motion carried.

The next order of business was the nomination of officers. Doctor Gallaher announced a 10 minute recess in order to give Districts No. 3, No. 4, No. 6, No. 9 and No. 12, an opportunity to caucus and decide on their nominations.

The House reconvened and the Speaker announced that the House was open for nominations for officers:

B. C. Chatham. M.D., Chickasha, nominated H. M. McClure, M.D., Chickasha, for President-Elect.

Wilkie Hoover, M.D., Tulsa, nominated John F. Burton, M.D., Oklahoma City, to succeed himself as Delegate to the A.M.A., for a two year term.

Francis R. First, M.D., Checotah, nominated Malcom Phelps, M.D., to succeed himself as Alernate Delegate to the A.M.A. for a term of two years.

Louis Ritzhaupt, M.D., Guthrie nominated George Ross, M.D., Enid, for Vice-President.

Malcom Phelps, M.D., El Reno, nominated W. W. Rucks, Jr., M.D., Oklahoma City for Secretary-Treasurer.

Louis Ritzhaupt, M.D., Guthrie, nominated C. M. Hodgson, Kingfisher, M.D., for Councilor and Henry Russell, M.D., Enid, for Vice Councilor from District No. 3.

Joe Duer, M.D., Woodward, nominated C. A. Traverse, M.D., of Alva as Vice-Councilor from District No. 4.

P. D. Casper, M.D., Oklahoma City, nominated Elmer Ridgeway, M.D., and Peter Russo, M.D., both of Oklahoma City as Councilor and Vice-Councilor from District No. 6, to succeed themselves.

A. L. Buell, M.D., Okmulgee, nominated Francis First, M.D., Checotah and I. W. Bollinger, M.D. as Councilor and Vice-Councilor from District No. 9, to succeed themselves.

O. H. Miller, M.D., Ada, nominated Wm. T. Gill, M.D., Ada, as Councilor and M. E. Robberson, M.D., Wynnewood, as Vice-Councilor from District No. 12.

Doctor Gallaher announced that the nomination of H. M. McClure, M.D., Chickasha, for President-Elect, without oposition, made it necessary for Councilor District No. 13, to elect a Vice-Councilor as the Vice-Councilor, John B. Miles, M.D., Anadarko, would become the Councilor.

Wm. A. Mathey, M.D., nominated Charles E. Green, M.D., Lawton, as Vice-Councilor from District No. 13.

This concluded the nomination of officers.

Following the nomination of officers, the Speaker recognized Doctor John Burton, who presented Elmer Hess, M.D., Erie, Pennsylvania, President-Elect of the American Medical Association.

Doctor Hess expressed appreciation to the Association for being their guest and gave an inspiring address on the importance of religion in Medical Ethics.

Dr. Bruce Hinson, President of the Association, read a telegram from Dr. James Stevenson, of Tulsa, Delegate to the A.M.A., who was absent because of illness. The telegram contained best wishes for the success of the Annual Meeting.

The next order of business was the report of officers.

Doctor Gallaher called on John Burton, M.D., Delegate to the A.M.A. to report on the House of Delegates meeting held in Miami, Florida.

Doctor Burton stated that as the minutes of the meeting had been published, there was not much new to report. The Cline Committee on Osteopathy had reported that they had finally obtained approval and consent of the governing body of the Osteopathic Association to permit inspection of their schools and that this would be done shortly, and the Committee felt confident that they would have a report to make at the next meeting to be held in Atlantic City in June.

Doctor Burton asked permission of the House to read a Resolution written to Doctor James Stevenson, who was absent because of ill-health. The resolution was read and referred to the Resolutions Committee to be acted on at the closing session.

The Speaker then called on each Councilor and asked if they wished to give a report of their Councilor Districts for the year. They were as follows:

District No. 1. F. S. Etter, Bartlesville, Councilor. No report.

District No. 2. E. C. Mohler, M.D., Ponca City, Councilor. Doctor Mohler reported that the regular order of business had been carried on throughout the year.

District No. 3. C. M. Hodgson, M. D., Kingfisher, Councilor. No report.

District No. 4. Joe L. Duer, M.D., Woodward. Doctor Duer reported that they had lost their Councilor, L. R. Kirby, M.D., and that he was acting as Councilor. No further report.

District No. 5. A. L. Johnson, M.D., El Reno, Councilor. Doctor Johnson reported that everything is quiet on the western front.

District No. 6. Elmer Ridgeway, M.D., Oklahoma City, Councilor. No report.

District No. 7. Paul Gallaher, M.D., Shawnee, Councilor. No report.

District No. 8. Wilkie Hoover, M.D., Tulsa, Councilor. No report.

District No. 9. F. R. First, M.D., Checotah, Councilor. Doctor First reported that while there were no representatives from Okmulgee present, they did want the House to know that they had finally defeated the osteopaths in that city.

District No. 10. As the Councilor or Vice-Councilor from this district were not present, no report was made.

District No. 11. A. T. Baker, M.D., Durant, Councilor. No report.

District No. 12. J. H. Veazey, M.D., Ardmore, Councilor. No report.

District No. 13. H. M. McClure, M.D., Chickasha, Councilor. No report.

District No. 14. J. B. Hollis, M.D., Mangum. Doctor Hollis reported that during the year they had had a meeting which had been attended by the President of the Association, Doctor Bruce R. Hinson, and Mr.

Dick Graham, Executive Secretary of the Association, which meeting had been a big success. He reported further that everything was under control in the District.

This concluded the reports of the officers.

Next on the Agenda was the Report of the Council. Bruce R. Hinson, M.D., President of the Association, made the following report:

COUNCIL REPORT

The Council in this report has elected to make its report solely on the basis of the necessary business to be transacted by the House of Delegates and the establishment of policy and procedure where indicated, leaving to the Committees of the Association the reports of accomplishment and future programs.

Membership

The paid membership of the Association on May 1, 1955, was **1504.** This is an increase over 1954 of 92. At the present time there are 42 Honorary and **104** Life members, giving the Association a total membership of **1650.**

Finances and Budget

As has been annually stated by the Council, the estimating of income and budget expenditures in May for the following year is extremely difficult, if not impossible. However, recognizing that such is necessary, the Council submits the following budget and estimated income predicated on 1955 dues and revenue to be received from the Annual Meeting and Journal advertising. (See end of Council Report.)

To finance this budget, the dues for 1956, must remain at $42.00 and the Council so recommends. Your Council has refrained from reporting on the other assets of the Association, pending the report of the Building Committee to the House of Delegates and the action taken.

Your Council feels it is suffice to say at this time that it has been privileged to review this report and concurs in the recommendations made.

Annual Meeting

As approved by the House of Delegates at the 1954 spring meeting, the 1956 Annual Meeting will be held in Oklahoma City, May 6-7-8-9, with the 1957 meeting to be held in Tulsa, the meeting date in Tulsa to be set after conferences with the Tulsa County Medical Society and the Tulsa Chamber of Commerce.

History of Medicine

With the death of Lewis J. Moorman, M.D., Chairman of this Committee, this project of the Association has been held in abeyance. However, plans are being developed to continue this work and the cooperation of all members is solicited.

Grievance Committee

Your Council urges the House of Delegates to pay particular attention to this report. It is your Council's opinion that the work of this Committee is one of the most important functions of the Association.

Honorary and Life Memberships

The Council has had submitted to it the following Life and Associate Memberships and recommends to the House of Delegates their election.

Life Membership

George S. Baxter, M.D., Shawnee
William M. Gallaher, M.D., Shawnee (Post)
S. H. Hamilton, M.D., Calvin
D. S. Harris, M.D., Drummond
Ralph E. Jones, M.D., Nicoma Park
Robert C. Kayler, M.D., McLoud

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Indicated wherever oral cortisone or hydrocortisone is effective • Available in 5 mg. tablets in bottles of 30 and 100 • Usual dosage is ½ to 1 tablet three or four times daily

Deltasone*

Less sodium retention, less potassium depletion

*Trademark for the Upjohn brand of prednisone (delta-1-cortisone)

E. W. King, M.D., Bristow
Morris B. Lhevine, M.D., Tulsa
J. T Price, M.D., Seminole
W. P. Spence, M.D., Sayre
Roscoe Walker, M.D., Pawhuska
Jesse R. Waltrip, M.D., Pauls Valley

Associate Membership

Robert M. Saylor, M.D., Shawnee
Simon Dolin, M.D., Oklahoma City
T. M. MacDonald, M.D., Tahlequah

Amalgamations of County Societies

The County Societies of Alfalfa and Woods Counties have submitted to the Council a request that they be amalgamated and be known as the Alfalfa-Woods District Medical Society.

Your Council recommends favorable consideration by the House of Delegates.

American Medical Education Foundation

In 1951, there was established the National Medical Education Foundation for the purpose of raising money from business and industry to help finance the medical schools. As one of its counterparts, there was founded by the American Medical Association, the American Medical Education Foundation to accomplish the same purpose by raising money from physicians.

Mr. Hiram Jones of Chicago, the Secretary of the latter Foundation, is to address the House of Delegates this afternoon and it is your Council's hope that the House of Delegates will take an action concerning the support the Association should give the Foundation.

Oklahoma State Board of Medical Examiners

Over the past years the Oklahoma State Board of Medical Examiners has not had the authority to indicate its own investigations and subpoena witnesses for violations of the Medical Practice Act.

During the present legislature the Medical Practice Act was amended to give the Board these rights.

The Council believes that with this new authority the Board will now be able to bring about a greater degree of enforcement.

Your Council is fully aware that the problems of the Board are many and varied and that all cases cannot be handled alike. On the other hand, there is a tremendous responsibility to the public for the actions of all physicians licensed under the Medical Practice Act and the public should have this protection.

Journal

The Council regrets that it is necessary to re-announce that the Editorial Staff of the *Journal* was of necessity changed, due to the untimely death of the Editor of the *Journal,* Dr. Lewis J. Moorman.

Succeeding Doctor Moorman to the position of Editor is Dr. Ben H. Nicholson, of Oklahoma City, who had been a member of the Editorial Board for 12 years.

With Doctor Nicholson's promotion to the position of Editor, there became another vacancy on the Board which was filled by the appointment of Dr. John Matt of Tulsa.

The Editorial Board as now constituted is made up of the following: Dr. Ben H. Nicholson, Oklahoma City, Editor-in-Chief, Dr. E. Eugene Rice, Shawnee, and Dr. John Matt, Tulsa.

The Council is of the opinion that this Editorial Board is continuing to maintain the high standards of the *Journal* of the Oklahoma State Medical Association and your Council would also at this time like to recognize the work on the *Journal* that has been accomplished through the efforts of Mary Lou Crahan as the *Journal* Secretary.

Under the supervision of the Editorial Board, the 1955 Directory has been published and will be available by May 15, 1955.

Your Council in conclusion would like to express its appreciation to President-Elect of the American Medical Association, Dr. Elmer Hess of Erie, Pennsylvania, for his appearance here today and the untiring efforts he is making in behalf of his profession.

Also, the Council extends its thanks to the Blue Cross-Blue Shield Plan for its generous contribution to the meeting. And certainly to the Tulsa County Medical Society and its Executive Secretary, Mr. Jack Spears, for the excellent program that has been arranged.

Your Council also regretfully reports that it has accepted the resignation of the Associate Executive Secretary, Mr. John K. Hart, who has been with the Association for the past seven years. Mr. Hart will leave the Association on June 1, to become the Executive Secretary of the American Academy of Orthopaedic Surgeons, with offices in Chicago. Your Council feels that it expresses the sentiment of the House of Delegates in wishing John and his family the greatest success and congratulates the Academy on its selection.

It is hoped by your Council that each and every Delegate will participate in the discussions in the House of Delegates.

1956 Budget

Income

DUES	$60,000.00	
JOURNAL	23,350.00	
ANNUAL MEETING	7,000.00	
COMMISSION—A.M.A.	350.00	
MISCELLANEOUS	700.00	
		$91,400.00

Expense

EXPENSES ON THE BASIS OF 1954 EXPENDITURES		
Office Expense	$37,000.00	
Annual Meeting	10,500.00	
Journal	25,000.00	
Public Policy Com.	2,500.00	
Public Health Com.	1,500.00	
Legal	1,200.00	
Out of State Travel	5,000.00	
Retirement	3,334.00	
TOTAL		$86,034.00
ANTICIPATED SAVINGS FOR 1956		
Salary of Associate Executive Secretary	$ 3,000.00	
Rental	750.00	
TOTAL		$ 4,750.00
ANTICIPATED ADDITIONAL EXPENSES FOR 1956		
Janitor Services	$ 1,200.00	
Interest	2,400.00	
Utilities	1,200.00	
Miscellaneous	1,500.00	
TOTAL		$ 6,300.00
EXPENSES FOR 1956		86,034.00
ADDITIONAL EXPENSES FOR 1956		6,300.00
TOTAL		$92,334.00

LESS SAVINGS FOR 1956	4,750.00
GRAND TOTAL EXPENSES	$87,584.00
TOTAL INCOME	$91,400.00
TOTAL EXPENSES	87,584.00
ESTIMATED 1956 SURPLUS	$ 3,816.00

Following a short discussion of items in the report, Marshall O. Hart, M.D., Tulsa, moved: "That the Council Report be approved as submitted." A. L. Johnson, M.D., El Reno, seconded the motion. Motion carried.

The Speaker called for a report of the Building Committee. R. Q. Goodwin, M.D., Chairman of the Committee, first introduced the members of the Committee who were present, and then made the following report.

Report of the Building Committee

The House of Delegates at its spring meeting in 1954, authorized the appointment of a Building Committee. Following this authorization, President Hinson appointed the President-Elect and the following past presidents to constitute the Committee: W. A. Howard, M. D., Chelsea; Paul Champlin, M.D., Enid; A. R. Sugg, M.D., Ada; Henry Turner, M.D., Oklahoma City; C. E. Northcutt, M.D., Ponca City; and John E. McDonald, M.D., Tulsa; with Doctor Hinson serving ex officio.

The Committee met, and after considering the needs of the Association and its financial condition, recommended to the 1954 midwinter meeting of the House of Delegates that a building site be secured, a building erected, the total cost not to exceed $100,000.00, and that the building be for the sole use of the Association. This recommendation was approved by the House of Delegates.

Following this approval by the House of Delegates, your Committte made an exhaustive Survey of building sites in Oklahoma City, as well as presently constructed property that might be renovated, and ultimately agreed that it was to the best interests of the Association to select a building site and construct a building.

The site finally agreed upon was 2.26 acres on the north side of Highway 66 By-pass, midway between the Santa Fe tracks and North Western at about 55th Street. The Association now holds a Warranty Deed on this property for which it will pay $6,215.00, which represents a cost of $2,750.00 per acre.

In consultation with the architectural firm of Coston, Frankfurt and Short, a preliminary plan was prepared for a completely air conditioned building of 4800 square feet, which can be constructed, including the cost of the land, for an estimated $91,615.00.

The next problem facing your Committee was the financing of the building. The Association has assets other than cash on hand of $22,700, $12,000 in Government Bonds, and $10,700 in Building and Loan deposits. Your Committee also ascertained that the cash operating reserve of the Association on December 31, 1954, was $37,636.65, and it was your Committee's opinion, as well as that of the Council, that this operating reserve should not be decreased more than $15,000. Thus, if the bonds and Building and Loan deposits, plus $15,000 reserve, were utilized,

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there would be a balance due of $53,915.00, to be raised by contributions, a special assessment, raise in dues or by loan.

Your Committee next investigated the loan market and found that loans were now being made on such type construction for four and one-half percent interest. It also secured an opinion from both attorneys of the Association and its auditor, that contributions would be tax deductible.

Your Committee at this point was faced with a difficult decision. The decision was as to the method of financing. Since your Committee was made up of past presidents, they were keenly alert to the fact that special assessments are not popular. The Committee also felt that it had not been authorized to request donations, although such contributions would be tax exempt. After much discussion and thought your Committee came to the conclusion that a loan should be secured and interest paid.

Your Committee next considered the manner in which the loan and interest would be repaid. A review of the budget of the Association was made in cooperation with the Council, and it was felt that the interest on the loan could be paid from the general fund and that a raise in dues of $8.00 per year for the 1500 members which would produce $12,000 per year would pay out the loan in not to exceed five years. Your Committee did not lost sight of the fact that an $8.00 raise in dues for five years would produce $60,000.00 and more than pay off the loan, but your Committee did feel that the balance collected, ($6,085.00) over and above the amount necessary to retire the loan should be set aside for future needs that might arise.

At this point your Committee would point out that the interest to be paid on a $53,915.00 loan at four and one-half percent interest paid out in five years would be approximately $6,750.00 and that if this sum ($53,915.00) were raised by special assessment, the interest could be saved.

Your Committee fully realizes that there are perhaps numerous physicians who would be willing to make a tax deductible contribution and is of the opinion that the Association should accept such contributions.

For the reasons set out above, your Committee recommends that the House of Delegates select one of the following as the method of financing:

A. Raise in dues of $8.00 per year for five years, which yearly sum would be set aside for the retirement of the Building Loan.

B. Place a special assessment of $35.00 on each member which would, on the basis of 1,500 members, produce $52,500.00 and preclude the paying of $6,750.00 in interest.

Your Committee also recommends that the Association accept contributions for the construction of the building if such are made.

Your Committee would state to the House of Delegates that its studies of the project has pointed up one thing: namely, that the Association is embarking on a project long over-due, but which in turn presents problems not before encountered by the Association. Your Committee realizes that the problems of ownership and operation of a Headquarters Building for the Association will necessitate a great deal of study and the making of decisions, and would, therefore, recommend that there be established by the Council a permanent Building Committee, the function of the Committee to be threefold:

A. Supervise Construction

B. Handle all financing problems subject to the approval of the Council

C. Have charge of operation and maintenance of the building.

With these recommendations and observations your Building Committee concludes its report and awaits the decision of the House of Delegates as to the manner of financing.

Respectfully submitted,

THE BUILDING COMMITTEE,
R. Q. Goodwin, M.D., Chairman
Paul Champlin, M.D., Enid
Bruce Hinson, M.D., Enid
W. A. Howard, M.D., Chelsea
John McDonald, M.D., Tulsa
C. E. Northcutt, M.D., Ponca City
A. R. Sugg, M.D., Ada
H. H. Turner, M.D., Oklahoma City

Oklahoma State Medical Association
Building Committee
Estimated Cost of Construction of Building

1. Cost of land (2.26 acres at $2,750)	$6,215.00
2. Estimated cost of construction $15.00 per square foot (4800 sq. ft.)	72,000.00
3. Cost of road construction and parking area	5,000.00
4. Architects and Attorneys fees (Architects fee 6% excluding land)	4,000.00
5. Equipment and decorations	2,400.00
6. Utilities (water well)	2,000.00
Total	$91,615.00

Building Budget

Cost of Building and Land	$91,615.00
Down payment from Surplus	37,700.00
Balance to be raised	$53,915.00
Financing Cost for five year period at 4½% interest	$ 6,750.00
Option A	
Annual Income 1500 Members at $8.00 each	$12,000.00
Income produced over five year period	60,000.00
Surplus in Building Fund at end of five year period	6,085.00
Interest	6,750.00
Option B	
Special Assessment	
1500 members at $35.00	$52,500.00
Interest	Nil

Following the report, Doctor Goodwin advised the House that the Council had unanimously adopted the full report and recommended to the House of Delegates that a special assessment of $35.00 per member be made to pay the building out in full.

A lengthy discussion followed as to the cost of financing of the building.

At the conclusion of the discussion, C. W. Arrendell, M.D., Ponca City, moved: "That the recommendation of the Council be accepted and that the money for the building be raised by the $35.00 special assessment per member." A. L. Johnson, M.D., El Reno seconded.

J. R. Colvert, M.D., Oklahoma City, offered a substitute motion: "That this debt be amortized by a 25 to 28 year loan and that no special assessment be made." The substitute motion was seconded and voted upon but did not carry.

Doctor Arrendell's motion was then voted on and carried.

At this point the Speaker recognized Joe M. Duer, M.D., of Woodward, the Association's representative to the American Medical Education Foundation. Doc-

tor Duer introduced Mr. Hiram Jones, Executive Secretary to the American Medical Education Foundation and called upon Mr. Jones to address the House.

Mr. Jones explained the organization of the American Medical Education Foundation and its aims and purposes. He stressed the importance of the individual doctors contributing to the support of the Medical Schools.

Following Mr. Jones address, a discussion was held. Doctor Duer moved: "That a sub-committee of the General Health Affairs Committee be appointed and this subcommittee be empowered to spend not more than $500.00 to acquaint each and every doctor in the State of Oklahoma with the work and aims of the American Medical Education Foundation." A. L. Johnson, M.D., seconded. The motion carried.

Next on the agenda was the report of the Public Policy Committee. In the absence of the Chairman of the Committee, John Records, M.D., Oklahoma City, Dick Graham made the following report.

Report of the Public Policy Committee

The activities of the Committee during the past year have been principally in the field of legislation, both Federal and State.

For the purpose of this report a resume of only State legislation will be given and your Committee then will call upon Dr. John E. McDonald of Tulsa to give the report on Federal Legislation inasmuch as Doctor McDonald is a member of the Legislative Committee of the American Medical Association.

Since the convening of the Legislature on January 4, there have been 88 bills introduced that have been reviewed by the Legislative Committee, which committee is composed of Malcom Phelps, M.D., El Reno, Chairman, Vernon Cushing, M.D., Oklahoma City, Vice-Chairman and the following members:

Tom S. Gafford, M.D., Muskogee
Louis Ritzhaupt, M.D., Guthrie
E. Faye Lester, M.D., Oklahoma City
John McDonald, M.D., Tulsa
Walter B. Sanger, M.D., Tulsa
Neil Woodward, M.D., Oklahoma City
James R. Reed, M.D., Oklahoma City

Of these bills only one (H.B. 649) had the sponsorship of the Association. This measure, which gave the Medical Board of Examiners the power to initiate its own actions and subpoena witnesses is now law.

Of special interest to the Profession were the following measures:

H. B. 's 508, 509, 514, 520—McCarty—Narcotic Bill.
H. B. 's 526 and S. B. 327—Free Choice of Physician—Russell and Payne.
H. B. 617, S. B. 71—Institutional Bill—Russell.
S. B. 18—Nannie Doss Bill—Shoemake.
S. B. 155—Optometry Bill—Collins.
H. B. 727—Board of Naturopaths—Bouse.
H. B. 744—Licensing of Opticians—Ozmun.
S. B. 313—Post Mortem Examinations—Shoemake.
S. B. 239—Hospitalization of T. B. Patients.
H. B. 647—Practical Nurse Bill—Spears.
H. B. 975—Salk Vaccine—Allard.

Appropriations for the Medical School has been the main project of the University of Oklahoma Alumni Association and your Committee has assisted whenever requested. From the general tenor of comment in the Legislature on appropriations, it would appear

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that the Medical School will probably receive an appropriation very near to that requested by the Board of Higher Regents, but which amount is substantially below the request of the school.

Two other bills were passed and have become law which will affect the Profession to some degree. H. B. 640 changes the Workmen's Compensation law to allow compensation to begin the first day of injury without waiting for five days. H. B. 730 provides that examinations given and treatment rendered to persons under Workman's Compensation shall be made available to the employee or his attorney upon request.

Concerning Federal Legislation, which will be reported by Doctor McDonald as previously advised, your Committee so far has not been requested by the A.M.A. to discuss any specific measures with the Oklahoma delegation. Attention is directed to the fact that Rep. Carl Albert of McAlester is the majority whip in the House of Representatives and is in a position to exert a great deal of influence.

Your Committee in addition to legislative work, has cooperated closely with the Oklahoma Chapter of the Student American Medical Association and is firmly of the opinion that this organization is most worthwhile.

During the past year the Committee again participated in the Oklahoma Industrial Tour and was represented on the tour by J. Hoyle Carlock, M.D., of Ardmore. It is anticipated there will be a 1955 tour and it is hoped that President Goodwin will be able to make the trip.

During the past year the Committee surveyed all communities in Oklahoma of 3500 or less that had a newspaper concerning facilities available for physicians. While the return was disappointing, it nevertheless has provided the Executive Office with valuable information to help in locating physicians who are looking for locations in small communities.

The attention of the House of Delegates is called to the most important Public Relations activity in which your Committee is assisting. This is the publication entitled **Your Doctor**, which is published by the Paul Andres Publications, Inc., and which goes complimentary to all physicians and dentists in the state of Oklahoma.

Your Committee has utilized the back cover of this publication to acquaint the public with many of the Profession's ideas in the field of public relations.

Your Committee feels that a vote of thanks should be extended to Mr. Paul Andres and that the Profession should assist him in any way they can in the promotion of this publication.

Your Committee wishes to take this opportunity to express its appreciation to the many members of the County Medical Societies who have in reality made this session of the Legislature a successful one, at least at this date of reporting.

JOHN W. RECORDS, M.D.,
Chairman

Elmer Ridgeway, M.D., Oklahoma City, moved: "That the Report of the Public Policy Committee be accepted." Motion seconded and carried.

Next was the report from the General Health Affairs Committee. Joe Duer, M.D., Woodward, made the following report:

General Health Affairs Committee

As authorized by the Council, the name of the Public Health Committee, since the last Annual Session of the House of Delegates, has been changed to General Health Affairs Committee. This action was taken because of the common misconception that the Committee was primarily concerned with Public Health, when in fact many of its activities bear little, if any, relation to Public Health as a governmental function.

Due to the diversity of functions as delegated to the Committee and as exercised by it, the Committee has continued to operate through sub-committees which have responsibility for specific areas of the Committee's responsibility.

Those Sub-Committees are:

1. Rural Health
2. School Health
3. Mental Health and Alcoholism
4. Indigent Indian Fee Schedule

It should be emphasized that the Sub-Committees do not necessarily remain the same from year to year, but are organized and discharged as circumstances warrant. For example, the Sub-Committee on Mental Health and Alcoholism was created during the past year upon recommendation of the A.M.A., and the Sub-Committee on Indigent Indian Fee Schedules was created at the request of the Indian Bureau and direction of the House of Delegates. At the same time Sub-Committees on Industrial Health, Blood Banks, and Nutrition were discontinued subject to reactivation when required.

By the very nature of the duties of the General Health Affairs Committee, a major portion of its activities are conducted jointly and in cooperation with various other groups and organizations. Typical of these are the programs of the Rural Health Sub-Committees and the School Health Sub-Committee.

The Rural Health Sub-Committee, as authorized by the House of Delegates, joined with the organizations in the State in the sponsorship of the Second Oklahoma Rural Health Conference on November 29, 1954, on the campus of the University of Oklahoma in Norman.

This Conference was most successful, judged not only by its total registration of 252 persons, representing 67 different communities of the State, but more important by the fact that a good majority of those in attendance came from the rank and file people of rural Oklahoma and its small communities. The Committee is also pleased to report that as a result of the Conference, Okmulgee County has conducted a County Health Conference which was very successful, and it is hoped that other counties in the State will soon follow Okmulgee's lead.

Immediately following this Session of the Association, the Rural Health Committee is prepared to again call together representatives of the groups which have sponsored the past Rural Health Conferences, and plans for the Third such Conference will be well under way by mid-summer.

Your Committee urges the continued approval of the House of Delegates for the Rural Health Conferences and enlists the support of the County Societies in this program which, we feel, is of such great importance to the profession and to the people of Oklahoma.

The School Health Sub-Committee, has during the past year, continued as an active sponsor of the Annual School Health Conference in cooperation with the Oklahoma Advisory Health Council, Oklahoma Association of School Administrators, State Health Department, and a number of other organizations, and plans are now being made for this fall's Conference.

An Annual Spring Workshop on School Health problems designed primarily for the personnel of the State institutions for teacher education and school admin-

istrators is likewise a project in which the Sub-Committee has cooperated as a sponsor. The third of these sessions will be held at the University of Oklahoma Biological Station at Lake Texoma on May 15, 16 and 17, and it is hoped that members of the profession in that vicinity will make it a point to attend a portion of that workshop session.

The problem of children being induced to attend school when actually too ill to attend, many times with communicable disease, is now being studied by your School Health Sub-Committee. While that study is not complete, it is apparent that one of the most important factors contributing to this problem is the present system of providing State financial aid to common schools on the basis of average daily attendance, a factor which has, in many instances, become much more compelling than the health and welfare of the children.

Conferences with representatives of the Oklahoma Education Association, with the object of legislation to correct this situation have convinced the Committee that the solution of this problem which is so closely connected with school financing will not be easy. The Sub-Committee is, however, prepared to continue its study and urges approval of the House of Delegates for this project.

The newly formed Sub-Committee on Mental Health and Alcoholism was created due to ever growing interest in its field both among the profession and the public, and while there is nothing concrete to be reported at this time, it is the belief of your General Health Affairs Committee that the problems of Mental Health and Alcoholism deserve much study and consideration by the Sub-Committee and that the Sub-Committee will require the support of every member of this Association when a program has been developed.

Your Committee was directed by the last House of Delegates to organize a Sub-Committee on Indigent Indian Fee Schedules and wishes to report that such a Sub-Committee has been formed. Due, however, to the transfer of administration of matters of Indian Health from the Department of the Interior to the Public Health Service, a transfer which will not be complete until about July 1, it has been completely impractical to attempt to enter into any negotiations regarding Indian fee schedules until that transfer of responsibility has been effected. Your Committee, therefore, requests authority to proceed further when the circumstances warrant it, and to report back to the House of Delegates at the earliest opportunity.

JOE L. DUER, M.D., Chairman

Doctor Duer moved: "That the report be accepted." Doctor John Burton seconded. Motion carried.

The Chair called for a report from the Grievance Committee.

George Garrison, M.D., Oklahoma City, made the following report:

Report of the Grievance Committee

The past year has been the first during which the Grievance Committee has operated under provisions contained in the By-Laws of the Association which were adopted at the last Annual Session of the House of Delegates. In only one case during this year has it been necessary for the Committee to invoke one

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of the new provisions of the By-Laws, namely referral to the County Society with recommendations, in order to conclude the case.

The Committee believes that the House of Delegates will be interested in knowing the number of cases filed during the past six years, and the general type of complaints, which is as follows:

Cases concerning the fee only	39
Cases concerning the service only	27
Cases concerning both fee and services	28
Cases not falling within above classifications	3
TOTAL	97

During 1954-1955 the cases filed before the Grievance Committee are classified as follows:

Cases concerning the fee only	7
Cases concerning the service only	2
Cases concerning both fee and service	7
Cases involving disagreement in regard to ethics between physician and patient	1
TOTAL CASES FILED 1954-1955	17
Pending cases carried forward from 1953-1954	5
Cases closed during 1954-1955	17
Pending cases	5

From a review of the cases, it is clear that by far the leading cause of complaints to the Committee is dissatisfaction in regard to fees. It can likewise be truly said that this dissatisfaction does not result from the fact that the fees are too high in most of the cases, but rather from the fact that the physician and the patient have not arrived at a clear understanding in regard to fees at an early stage in their relationship. As a result, the Committee wishes to emphasize that if all members of the Association would take the time to frankly discuss the matter of fees with their patients when it is indicated that the procedures to be undertaken will require more than nominal expense, there is little doubt that it would be possible to eliminate approximately 75 percent of the cases which came to the Committee. This means not only discussion of fees for major surgical procedures but for medical services as well, especially for complete physical examinations with the necessary laboratory and X-Ray services.

One practice which causes misunderstanding is that some physicians delegate to their secretaries or other personnel the responsibility for handling all arrangements in regard to fees and collections. The Committee, of course, realizes full well that routine matters of this sort should not consume the time of the physician. On the other hand, when a fee or any other matter has become the subject of misunderstanding or dispute between the physician and the patient, it is the belief of the Committee that the matter should be personally handled by the physician directly with the patient.

In that connection, the Committee would likewise emphasize that letters obviously dictated by the physician and written in the third person, and signed by the secretary are indeed not an evidence of good faith on the part of the physician and are readily recognized for what they are.

Likewise similar correspondence written by the secretary without consultation with the physician cannot be expected to produce a satisfactory solution of such situations.

While your Committee does not wish to question the use of the services of collection agencies, the Com-

mittee would point out that in the field of collections lies the major area from which complaints arise, either from the approach or methods employed by the physician, his staff, or a collection agency—and usually from the latter. A serious effort should be made to discuss with the individual, personally, the matter of the fee and the manner of payment before it is released to an agency for collection, and this is especially true if there is any reason to believe that the patient feels the charge is excessive or unjustified under the circumstances.

Another impressive cause of public dissatisfaction with the profession which could easily be eliminated is produced by the failure of the physician who requires consultation to make clear to his patient the relationship between the patient and consultant, and the patient's responsibility for the fees of the consultant.

During the years the Committee has been impressed by the fact that there is an apparent tendency for some members of the profession to charge one fee to the patient who is paying his bill from his own funds and another when the bill is being paid by insurance funds. The profession should assume its responsibility toward the successful maintenance of the pre-paid medical, surgical, and hospital plans by keeping fees on a fair and reasonable plane and by assisting the insurance companies in whatever way they can and by having the courage to dis miss patients from the hospital when hospital care is no longer necessary. In this way the various companies may know what percentage of the problem they are actually meeting.

Perhaps the conclusions of the Committee report can best be summed up by the statement that a satisfactory and sound physician-patient relationship can best be based upon the Golden Rule. Courtesy, consideration and sympathy for the problems of the patient are indeed the attributes of the true physician; a few minutes taken occasionally from the busy rounds to understand the patient's viewpoint, could eliminate such misunderstanding and change an unhappy person into a grateful patient.

Finally, the biggest single factor in good Public Relations is the day to day relationship of the patient and his physician.

After observing at close range the problems and accomplishments of the Committee, we are impressed generally with the cooperation of members of the Medical Profession in the attempt to clarify misunderstanding, disagreement, and criticism. Isolated instances occur in which an individual does not give his immediate and complete assistance but as the efforts of this Committee continue in a fair and impartial manner, the general approval and support of the Committee by the Profession as a whole, will gradually overcome such attitude.

It was moved and seconded that the report be accepted. Motion carried.

Next on the agenda were the Amendments to the Constitution and Bylaws. John Hart, Associate Executive Secretary, read the amendments and explained why they were desirable.

The Chair referred the proposed Amendments to the Committee on Constitution and Bylaws, to be acted on at the closing session.

The Speaker called for any unfinished business. None was forthcoming.

Doctor Gallaher called for Resolutions to be presented from the floor, such Resolutions to be presented by title only at this time.

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

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Malcom Phelps, M.D., introduced a Resolution regarding the Accreditation of Hospitals. The Resolution was referred to the Resolutions Committee for action at the closing session.

The Speaker called on John McDonald, M.D., a member of the American Medical Association's Committee on Legislation.

Doctor McDonald brought the doctors up-to-date on National legislation pending which would affect the Profession. He advised that the Doctors' Draft Bill would probably be passed again. He also explained the status of the non-service connected disability program in Veterans Hospitals.

J. R. Colvert, M.D., moved the acceptance of Doctor McDonald's report. Motion seconded and carried.

The Speaker called for a report from the Committee on Civil Defense In the absence of Gifford Henry, M.D., Tulsa, Chairman of the Committee, Dick Graham made the report.

Mr. Graham reported that Doctor Henry had been chairman of this Committee for several years and that while there had been considerable talk regarding Civil Defense, nothing definite had ever been done about it. He stated that the problem was that in the absence of a concrete national program, it was felt by Doctor Henry and the members of the Committee that it was not worthwhile to go out to the County Medical Societies on their own initiative and set up some type of medical defense plan and then have it countermanded by some type of national program. He advised the counties which had gone ahead and set up some type of Civil Defense, to continue to do so, but that the Committee would have to wait for the development of a national program.

Doctor A. L. Johnson moved: "That the report be accepted." Doctor Deputy seconded. Motion carried.

Doctor Louis Ritzhaupt of Guthrie moved: "That the Oklahoma State Medical Association request of the American Medical Association a program on Civil Defense for Oklahoma." Doctor Duer seconded the motion.

Doctor C. N. Talley of Marlow amended Doctor Ritzhaupt's motion: "That a Committee of the Oklahoma State Medical Association be appointed to contact the American Medical Association to try to formulate some plan for them on Civilian Defense and then let this Committee formulate a plan for the entire State."

Doctor Johnston seconded the Amended motion. It did not carry.

A vote was taken on Doctor Ritzhaupt's original motion. It did not carry.

The Speaker called for a report from the Committee on Office Management and Insurance Committee. In the absence of W. W. Rucks, Jr., Chairman of the Committee, Dick Graham made the following report:

Office Management and Insurance Committee

Your Committee has had no occasion to meet during the past year inasmuch as its programs have been functioning in a harmonious manner.

During the past year and following the authority given by the House of Delegates, Remington Rand and Company surveyed the filing and membership record systems of the Association and brought about a complete renovation. The office equipment of the Association is now in excellent functional condition.

The Group Health and Accident Insurance Policy held by North American Indemnity Company is continuing to be offered to new members and others who in the past have not purchased the contract. It should be kept in mind, however, that the Association's program with the North American covers only the basic policy of $50.00 per week and any extended coverage purchased from the North American is in no way a part of the Program of the Association.

Your Committee does feel that it should place special emphasis on the Association's Malpractice Program with the Saint Paul Mercury Indemnity Company of Saint Paul, Minnesota. This program of the Association has become almost a model program for State Medical Associations. Recently representatives of the Association were invited to Atlanta, Georgia, to explain the program to representatives of five Southern States, one of which has already adopted a similar program.

W th this prominence cannot go complacency in the promotion and protection of our own program. While today the problems in the field of malpractice in Ok'ahoma are satisfactory to our insurance carrier, it must be recognized that this has only been brought about by the excellent work of the County Medical Society Malpractice Committees working in conjunction with the insurance company. On the other hand your Committee feels that it would be remiss in its report if it did not call attention to the fact that malpractice suits or threatened suits, all of which call for, at the minimum, investigation, are on the increase and can only be reduced by the complete cooperation of the Profession.

Your Committee would point out that physicians in Oklahoma who are members of the Association are enjoying the lowest malpractice insurance rate $10/30,000 minimum coverage there is in the 48 states.

The Committee would call to the attention of the House of Delegates that in some States coverage in the same amount is costing the physician in excess of $20.00 per year.

It is your Committee's intention for the coming year to request each County or District Medical Society to have one program a year devoted to this subject.

Certainly this program deserves the earnest consideration of every member of the Association if for no other reason than that it means a cash money saving for himself.

Your Committee would at this time express its appreciation to the personnel of the Saint Paul-Mercury for the excellent job they are doing in presenting the program to the Profession and especially to Mr. Roger Bainbridge who is the adjustor. Without the dedication to the problems of malpractice as shown by Mr. Bainbridge, this program would not have succeeded.

Your Committee would make the following observations:

A. Report any suspected claim at once to the Insurance Company.

B. Do no criticize or **comment concerning** a colleague's diagnosis or treatment.

In conclusion your Committee would call to your attention that the Saint Paul Mercury has a booth in the technical exhibits and it might perhaps profit all members to visit with the representative of our insurance carrier for their own ultimate protection.

W. W. RUCKS, Jr., M.D., Chairman

It was moved, seconded and carried that the report be accepted.

The Speaker called for a report from the Committee

on Scientific Work. As Walter E. Brown, M.D., Chairman of this Committee was absent, Mr. Graham submitted the prorgam as a report and congratulated the Committee on an excellent scientific program.

Ross Deputy, M.D., moved that the report be accepted. Motion seconded and carried.

As this concluded the business of the first session, the meeting was adjourned, and after a short discussion the re-convening time was set at 8:00 p.m.

Doctor Gallaher asked the Vice-Speaker of the House, Keiller Haynie, M.D., Durant, to take the Chair.

Doctor Haynie asked everyone to stand and he read the Necrology Report.

Necrology Report

Since the last Necrology Report in May, 1954, the Almighty, in His Infinite Wisdom has called from our midst 61 of our beloved friends and co-workers. While we bow in sorrow to the will of the Almighty, we are appreciative of these wonderful men—physicians, scientists, teachers and friends, and their far-reaching influences which will continue to inspire us to carry on their duties to humanity.

THEREFORE, BE IT RESOLVED that the House of Delegates of the Oklahoma State Medical Association recognize the demise of those former fellow physicians and instruct the Secretary to inscribe with honor and regret the following names upon the records of the Association:

J. S. Allison—Tahlequah—April 27, 1955
George Washington Baker—Walters—July 15, 1954.
Ephriam Richard Barker—Healdton—April 23, 1955.
Alexander Barkley—Norman—September 25, 1954.
Joshua Phillip Beam—Watonga—1954.
John Holmes Beatty—Tonkawa—1954.
Wm. Arthur Bullock—Woodward—1954.
W. H. Campbell—Chickasha—January 18, 1955.
Roy Francis Cannon—Miami—July 15, 1954.
William Sheldon Cary—Reydon—January 21, 1955.
John Benjamin Clark—Coalgate—November 16, 1954.
Fred S. Clinton—Tulsa—April 25, 1955.
Abe Walker Coffield—Drumright—October 5, 1954.
William Edward Cravens—Hugo—October 8, 1954.
Barclay Evans Dozier—Shidler—November 24, 1954.
Jesse Walter Driver—Perry—September 19, 1954.
Para F. Erwin—Wellston—June 10, 1954.
Glenn Francisco—Enid—1954.
John Winfield Francisco—Enid—February 28, 1955.
William Marshall Gallaher—Shawnee—April 2, 1955.
David Walter Gillick—Talihina—April 30, 1952.
Roy Keene Goddard, Sr.—Skiatook—January 25, 1955.
Elmer Everett Goodrich—Chickasha—June, 1954.
Dan Feurt Gray—Guthrie—February 25, 1955.
Harry Green—Tulsa—March 31, 1955.
James Barnett Hampton—Duncan—October 11, 1954.
Prescott Herndon Haralson—Fairfax—February 1, 1955.
Arthur Fletcher Hobbs—Hinton—March 12, 1955.
Logan Herbert Huffman—Oklahoma City, June 19, 1954.
Henry Edwin Huston—Grove—September 26, 1954.
Benjamin Franklin Johnson—Fairview—November 28, 1954.
Carrol Allen Johnson—Ardmore—December 19, 1954.
Henry Lee Johnson—Woodward—April 23, 1955.
Richard Revel Johnson—Sand Springs—June 17, 1954.
Matthew Karasek—Shidler—May 14, 1954.
Corliss C. Keppler—Woodward—July 14, 1954.
Henry Watson Larkin—Guthrie—July 10, 1954.

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Thaddeus Condit Leachman—Richmond, Va. (formerly Woodward)—July 5, 1954.
Robert Edwin Leatherock—Cushing—June 2, 1954.
Powell K. Lewis—Sapulpa—April 29, 1955.
Alonzo Columbus McFarling — Shawnee — July 29, 1954.
Charles B. McMillan—Gracemont—1954.
James Curtis Matheney—Okmulgee—January 20, 1955.
Walter Howard Miles—Oklahoma City—August 31, 1954.
Lewis Jefferson Moorman—Oklahoma City—August 2, 1954.
Gerald C. Mullins—Broken Bow—December 18, 1954.
Eli Paulus Nesbitt—Tulsa—April 23, 1955.
Charles B. Reese—Sapulpa—May 2, 1954.
Thomas Franklin Renfrow—Billings—July 8, 1954.
William Patrick Ruddell—Davis—April 2, 1955.
Hudson S. Shelby—Oklahoma City—July 14, 1954.
Russell Jamison Shull—Hugo—November 5, 1954.
Donald Hector Smith—Fairview—1954.
William Benjamin Smith—Fairland—February 9, 1955.
Harvey Alexander Stalker—Pond Creek—July 18, 1954.
Thomas Wesley Stallings—Tulsa—1954.
Frederick R. Sutton—Oklahoma City—August 11, 1954.
Guy B. Van Sandt—Wewoka—May 3, 1955.
Sidney C. Venable—Tulsa—March 28, 1955.
Jesse Emmons Wallace—Tulsa—March 19, 1955.
Floyd Warterfield—Muskogee—November 10, 1954.

Minutes of Second Session in August issue

PROFESSIONAL
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Officers Named

Twenty Oklahoma physicians attended the meeting of the Oklahoma Chapter of the American College of Chest Physicians held Sunday, May 8 at Tulsa.

Alvis E. Greer, M.D., Houston, Texas, a past president of the College was a guest.

Officers elected were F. P. Baker, M.D., Talihina, President; Will G. Crandall, M.D., Sulphur, Vice-President; and George L. Winn, M.D., Oklahoma City, Secretary-Treasurer.

CLASSIFIED ADS

NOTICE: Physician with old established general practice and good downtown location in Oklahoma City, who is slowing up and planning on retirement a little later has good proposition for young general practitioner who will do obstetrics and perhaps some surgery. Contact Key H, care of the Journal.

FOR SALE: Physician's office furniture and equipment. Reasonable rate. Reception room furniture, ice box, safe, X-ray, fluoroscope and dark room, scales, surgical instruments, practically new examining table and matching cabinet. Good opening for a young doctor wishing to locate in a town of 25,000 in eastern Oklahoma. Office equipment still in original space. This space is available at a reasonable rent. Contact Miss Eunice Lewis, 502 Lindsay Road, Norman, Okla.

FOR SALE: Surgical, obstetrics instruments. Plate glass instrument cabinet. Electronic equipment. Contact Mrs. Dan Gray, Guthrie, Oklahoma. Phone 393.

WANTED: General practitioner to fill vacancy in Stilwell, Oklahoma, population 2,500, county seat, new 18 bed hospital. GP leaving June 1. Heavy general, obstetrical, and surgical practice grossing $24,000 last year. Modern air conditioned office with General Electric fluoroscope and patient records available if desired. Contact B. F. Green, M.D., Stilwell, Okla.

WANTED: Surgeon and GP to head three man group in rural hospital, northwest Oklahoma. Excellent opportunities. Northwest Community Hospital, Mooreland, Oklahoma, c/o Administrator.

FOR SALE: Clinic, all equipment, practice established, excellent set up for one or two young doctors; easy terms. M. S. Anderson, Wewoka, Oklahoma.

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Editorials

The Goose and the Golden Egg

A man in his late thirties walked across the street to the hospital. He had on clean work clothes, a faded blue shirt and khaki pants and was gently supported by his wife. She wore a clean pink cotton dress. Her figure said that she had a good appetite and liked to cook. Her hands said that life was more earnest than fun. The man carried a battered overnight case in his left hand Between the handle and his thumb he held an insurance policy much as a country boy might hold a train ticket for easy inspection on his first visit to the city. It was that important.

That piece of folded paper meant to that man and woman just exactly what it was intended to mean—he could pay his way—he need ask neither credit, nor time, nor charity from any hospital or any doctor. He and many others like him had pooled their resources in small monthly payments for just such a necessity as this.

To the hospital that contract meant a paying patient: nothing more, nothing less. The hospital had come more and more to depend on these contracts for its life—less and less on collecting agencies.

How about the doctor? Does such a contract mean what it should to the doctor? In most instances, yes. To some, however, it seems to mean an extra source of revenue. This may be simply from muddled thinking. There are a few fundamental questions that need answers. Here are my answers—if there are those who differ the *Journal* would be glad to hear from them.

Does the fact that a man has medical care insurance or even "dread disease" or "extended" coverage place him in a different income category? It does not. *The fee for service is still trading the doctor's knowledge and skill for the man's working time.* The doctor is assured payment for his services. The source of the payment should be of little concern to him.

Should the charge be a reasonable one with some consideration given to the man's income and earning capacity whether he has extended coverage or not? I think so. *We do not permit an insurance company or Blue Shield to set our fees for a less amount than we think is reasonable. Why then should we expect more or accept more from them than is reasonable?*

What would you think of an automobile body shop owner who quoted you a figure of $150.00 to repair the damage to your car but changed the amount to $300.00 when he learned that you had insurance which would pay most of the cost? I would think the same and you and I would think the same of any doctor who behaved in a similar fashion. We have such men.

It is inconceivable that men whose fellow citizens paid most all of the cost of their medical education should forget so quickly that they have an obligation, which is not satisfied by taxes even though willingly paid. Neither state institutions nor endowed schools train men to be physicians in order to realize taxes from them. These men bring discredit on the whole profession. They belong to the State Association—do they owe the group that constitutes the society anything? I think they do. By belonging they have professional standing. The doors are opened to other societies and to society meetings. The way is clear for employment by business, by industry and by insurance companies. Hospital staff appointments are not considered when an applicant is not a member of his county society.

Does the State Association have a right to expect behavior of its members that would not bring shame on the whole group? I think it does, just as a father has a right to expect that of his child. The father would punish his child or would kick him out of the home if he were old enough and could not be salvaged. Should we kick such members out? Some few, perhaps, but I believe a great deal of unfairness stems from a lack of understanding—an effort to be completely independent in a complex society where such is not possible—a desire to keep up with the Joneses—ignorance of the application of simple arithmetic for it takes the monthly

savings of five times as many people to pay a $1,000.00 bill as it does to pay a $200.00 one—the goose cannot long lay that size eggs on his present diet and a much richer one cannot be provided.

A better understanding would come quickly if the findings of the Grievance Committee were published in the *Journal* when that committee judges a member guilty of unfair practices. The father needs some milder means of punishment than to kick the child out of the home.

Agammaglobulinemia

Many cases of idiopathic agammaglobulinemia have been described since Krebs called attention to this condition in 1946. Prior to this time the syndrome was not recognized because, without the aid of antibiotics and sulfonamides, most victims were dead within the first few years of life.

Bruton[1], in 1952, and Janeway et al[2], a year later, reported a total of 12 patients who exhibited such similar characteristics as, consistent absence of gamma globulin in the serum and inability to produce specific antibody response to administration of antigens and toxoid.

Following publication of these reports a rash of confirmatory similar case reports appeared in the American and European literature.

These children, from an early age, were afflicted with repeated severe pyogenic infections involving chiefly the respiratory tract, the ears, the conjunctivae and the skin. Lang et al[3], using human gamma globulin labeled with radioactive iodine (I^{131}) learned that the defect is essentially due to a lack of formation of gamma globulin and not to an increase in break-down of the protein. This confirms also the finding, that the half life of injected gamma globulin is as long as or longer than normal, thus showing that abnormally rapid destruction of GG is not a cause of agammaglobulinemia.

While most patients have been boys, several writers have recently reported the condition in girls. This would appear to negate the proposal that agammaglobulinemia is transmitted as a sex-linked recessive trait, such as hemophilia. This sexual disparity, based on a supposed genetic difference, has led to the proposed division of agammaglobulinemia into a *congenital type* composed entirely of males with a history of recurrent infections from childhood with electrophoretic analysis revealing complete absence of serum gamma globulin; and the *acquired type* composed of all other cases, including all females, demonstrating clinical and laboratory findings similar to the first group. Fried and Henley[4] found that determination of serum gamma globulin content is more sensitive by the fractionation method than by electrophoresis. They believe that the apparent difference in types may actually be one of a critical level of gamma globulin.

They have classified the reported cases of both "types" of agammaglobulinemia into these two types: (1) The patient is infrequently ill, has hypoproteinemia which responds to high protein feedings, but who does not respond to Schick and Dick tests or to various antigens; and (2) Children who have frequent infections (viral excluded) and who do not respond to toxoids or antigens but do respond to administration of gamma globulin.

Much experimental work remains to be done before the specific biochemical defect responsible for agammaglobulinemia can be clearly outlined. However, until that time, the practicing physician might be wise to re-evaluate those patients of his who seem to be made of what the medical student described as "just plain poor protoplasm." If any patient fits the pattern of repeated attacks of severe infections with any of the common pyogenic bacteria, particularly if neutropenia is present and the patient is a male, the diagnosis of hypo- or a- gammaglobulinemia should be seriously entertained. If the patient responds rapidly to monthly subcutaneous injections of 0.1 Gm. of pooled normal serum gamma globulin per kilogram of body weight, as recommended by Grant and Wallace[5], complete electrophoretic studies of the patient's serum would be advisable.

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Scientific Article

Nontraumatic Emergencies in PEDIATRIC SURGERY

JOE L. SPANN, M.D.

Obviously, the practice of surgery in the peace time military service differs considerably from that during war. The extension of medical care to dependents of servicemen has created large pediatric clinics at many stateside and overseas station hospitals. These masses of children afford a wealth of experiences in pediatric surgery, more than is usually encountered in residency training in general surgery or in civilian practice during a comparable two-year period.

Source of Material

The 3201st USAF Hospital at Elgin Air Force Base, Florida, supplies the medical needs for about 25,000 persons. There are 20,000 pediatric outpatient sick visits annually, and half as many patients are seen as "emergencies" after regular duty hours. A hundred babies are born at this hospital each month. Besides an abundance of lacerations, contusions, and fractures of varying severity, a group of nontraumatic surgical emergencies found in these young patients is worthy of consideration. All of the cases cited in this report were treated definitively at this installation by the author, while a member of the surgical service, 3201st USAF Hospital from June 15, 1953, to December 15, 1954. This presentation is justified by the interesting variety of cases rather than by the absolute number or rarity.

Congenital Evisceration

There are three varieties of congenital evisceration through the anterior abdominal wall. Their gross appearances are similar. and their proper identification and nomenclature have been vague or grossly inaccurate in the literature. Moore and Stokes[9] advanced a concise classification of these conditions which I have followed:

1. *Omphalocoele:* This is an anomaly of the umbilical cord and is the most common of the three conditions. The viscera herniates into the base of the umbilical cord because the yolk sac-vitelline connection fails to obliterate. The covering membraneous sac or its ruptured remnants are present. The umbilical cord inserts into the sac. The obvious danger of an omphalocoele is rupture of the sac with gross contamination of the peritoneal cavity. Death is certain unless there is early surgical intervention. Infants with omphalocoele should be handed directly from the obstetrician to the surgeon according to Gross[4].

No. 65610, an infant girl was delivered with this deformity on October 3, 1954, the product of full term pregnancy. She had a small unruptured omphalocoele filled with bowel. The sac measured approximately 3 cm. at the neck and approximately 10 cm. in length (figs. 1 and 2). No other congenital defects were noted. At surgery the omphalocoele was excised, after ligating umbilical vein and arteries separately and returning the viscera to the abdominal cavity. In this patient, the incarcerated structures were the terminal portion of small bowel, appendix, and ascending colon. The immediate postoperative appearance was as shown in fig. 3.

THE AUTHOR

Joe L. Spann, M.D. is now practicing in Tulsa after serving in the Air Force. He was graduated from the University of Oklahoma School of Medicine in 1948 and interned at St. Luke's, Chicago. He served a residency at Hillcrest Hospital in Tulsa.

From the Surgical Section of the 3201st U.S.A.F. Hospital, Elgin, A.F.B., Florida. The opinions or assertions contained herein are those of the author and are not to be construed as official or reflecting the views of the U. S. Air Force.

The patient was discharged to home on the fifth postoperative day and development has been normal to date.

Comment

Fortunately, the patient had a relatively small unruptured defect, so I was able to do a primary repair without crowding abdominal and thoracic organs. In large defects it may be impossible to close all layers of abdominal wall. If so, one must mobilize a large area of surrounding skin to furnish a protective skin covering for the herniated viscera and later must do a second stage hernioplasty.

2. An *intussusception* of ileum through a persistent omphalomesenteric duct is rare. The prolapse of inverted mucosa-covered small bowel presents as a T-shaped mass at the umbilicus. There is no covering sac. This anomaly may be present at birth; but preceded by a fecal fistula, it usually appears in the child's first and fourth week of age.

3. *Gastroschisis* is an extra-umbilical anomaly of the abdominal wall, composed of a large eviscerated mass of discolored intestine of leathery consistency. The intestines are often embedded in gelatinous matrix. There is a normal insertion of the umbilical cord. There is no sac or sac remnant.

No. 66857, an infant girl, was delivered one month prematurely by an uncomplicated parturition following a normal gestation. The obstetrician immediately recognized the eviscerated mass of bowel as a surgical emergency, and the child was brought to the operating room within an hour after delivery. This was the firstborn of the young parents, and there was no family history of congenital abnormalities. The infant's weight was 1750 grams. The defect in the anterior abdominal wall through which this mass extruded measured 6 cm. in diameter and was extra-umbilical. The umbilical cord entered the abdomen 1 cm. to the left of this large defect. Examination revealed the eviscerated mass to be composed of leathery, discolored gastrointestinal tract, stomach to distal colon, all inclusive, suspended by a short mesentery (fig. 4). The bowel was sufficiently dark as to be suspected as volvulvus and infarcted, but no actual twisting of the mesentery was demonstrated. The fimbriated end of the left salpinx was visible at the lower left portion of the defect. There was no sac or sac remnant. I attempted to close the defect, or rather to cover the eviscerated mass with skin, after preliminary ligation of umbilical vein and left umbilical artery with excision of cord. The skin of the abdominal wall was undermined at the depth of the subcutaneous fascia. The dissection was extended laterally into each flank, inferiorly to the pubis, but limited superiorly to the level of costal margin. This limitation was imposed for fear of further embarrassing respiratory excursion, which was soon to be greatly compromised by the inclusion of the relatively immense mass within the abdominal cavity and its new hernial compartment. This is essentially the procedure described by Gross[4] in dealing with giant omphalocoeles, modified by transecting the left rectus muscle. Aspiration of the bowel contents with No. 17 needle and syringe did not materially reduce the volume of the thickened bowel, and skin approximation produced a drum-tight abdomen. The patient's immediate postoperative condition was precarious. The infant was placed in a high oxygen humidified (Alevair) atmosphere, prophylactic antibiotics were administered and intermittent gastric suction applied via catheter. Although the child did well for several hours, her condition suddenly deteriorated and she died 17 hours after surgery.

Postmorten examination revealed viable skin flaps distended, thickened gastrointestinal tract as previously described, and atelectasis of both lungs.

Comment

The exact etiologic factors of the condition are as obscure as those for most developmental anomalies. The mechanism of gastroschisis is as follows: Because the abdominal wall components fail to develop or fuse, there is a large defect, through which the usual intraperitoneal structure protrudes. These structures are thickened by their bath of amniotic fluid with vernix caseosa and other constituents. The absence of the herniated structures from the developing abdomen removes a potent stimulant for increas-

FIG. 1: Unruptured small Omphalocoele—Lateral.

ing the size of the abdomen. Thus the abdomen is even smaller than normal and the difficulties of the surgeon are increased.

Moore and Stokes[9], reviewing the world literature, found only five cases of true gastoschisis, to which they added two of their own. Of these seven cases, only five were operated on, the others deemed surgically hopeless. Only the patient reported by Watkins[14] in 1943 has survived this unfortunate anomaly; but it is expected that with a better understanding of neonatal physiology and improved antibiotics, several of the less severe patients can be salvaged.

FIG. 2: Unruptured Omphalocoele.
FIG. 3: Completed Omphalocoele repair.

FIG. 4: Gastroschisis—Preoperative. Note distended thickened bowel. Fallopian tube in lower portion of defect.

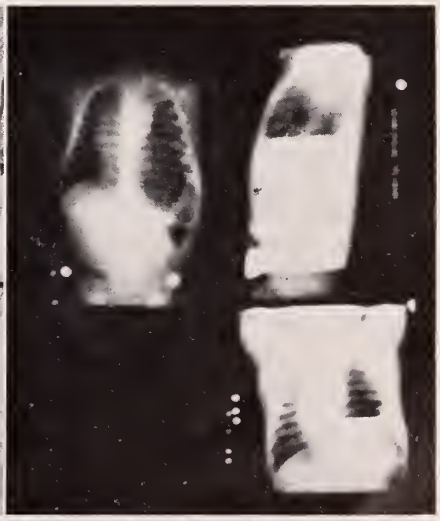

FIG. 5: Multiple X-ray views showing incarcerated hollow viscera in left chest with collapse of left lung and shift of mediastinum to right. Note distinct fluid levels in upright lateral and AP projections.

Congenital Hernia

Congenital hernias are potential sources of extreme emergency. Once discovered, they should be obliterated at the earliest "safe" age as a non-emergency procedure. Incarceration occurs most frequently in patients under one year of age[2]. There is no chronologic age at which surgical repair becomes absolutely without hazard; and the decision as to when to operate must be made after consideration of the size and nature of the defect; history of incarceration; general developmental and nutritional status of the child; and other attendant factors, such as congenital heart disease. Many premature infants have multiple hernias. The umbilical variety is likely to close spontaneously by the time the child is a year old; but some of the narrow necked umbilical sacs with episodes of incarceration may require ligation, and the unusually large ring will eventually call for surgical operation. Parents and practitioners are naturally reluctant to subject these babies to early surgical intervention for a condition that is not causing immediate trouble. After incarceration and/or strangulation, the need is immediate and the indications for surgical operation are acceptable to all.

No. 57182. This two year old white boy was known to have had a right inguinal hernia since birth. Herniorrhaphy had been previously advised, but the parents deferred it. On July 23, 1953, a painful swelling appeared in right groin at appromixately 6:30 p.m. At 8:30 the patient vomited. The painful swelling in the right groin had increased in size since the parent first noticed it. Physical examination on the patient's admission to the hospital revealed an acutely ill white male with turgid, incarcerated right inguinal hernia, which was exquisitely tender. Other physical findings were within normal limits. The evening of admission, herniotomy released incarcerated omentum, which remained viable. There was no bowel involvement. A simple hernioplasty was performed by exercising the hernial sac. Postoperative course was uncomplicated, and the child was sent home on the second postoperative day.

Comment

Authorities generally agree that simple excision of the hernial sac is sufficient to cure these congenital hernias.

A differential diagnosis of incarcerated scrotal hernia is usually not difficult, but one must duly consider each of the following: Hydrocoele, spermatocoele, hematocoele, testicular tumor, and testicular torsion. The last is an emergency, if the testicle is to be saved.

C.W.K. This white infant boy was a full term spontaneous delivery at 1:25 a.m. on September 9, 1954. No abnormalities were noted by the obstetrician at time of delivery or at 8:00 a.m. by the pediatrician. During the day one of the nursing attendants noted swelling and discoloration in the right side of the scrotum. The child did not seem to be in any distress; he had had normal feeding and normal meconium stool. At that time an examination by a member of the surgical service revealed a globular cystic mass in the right half of the scrotum with purplish discoloration approximately 2 x 1½ x 1½ inches, without extension into the right cord; or a suggestion of incarceration. The light source was poor, and he was unable to determine whether or not this mass transillminated. Final impression was hematoma of the testicle, possibly due to birth injury or spontaneous hemorrhage. A diagnosis of torsion of testicle or rete testes was entertained. The child was observed closely through the night, and there was no abdominal distention or other suggestion of intestinal obstruction. No treatment was prescribed, and the child was seen one week later in the GU Clinic, when the surgeon decided that he should be admitted for surgical exploration of the scrotum for probable torsion of the testicle but particularly to eliminate the possibility of a neoplasm. The right half of the scrotum was firm, bluish-purple, acutely tender, filled with firm mass that would not transilluminate and could not be delineated as to testicle, epididymis, etc. The discoloration extended across median raphe to include about one-half of the left side of the scrotum. With local anesthesia, the scrotum was explored. All the layers of the scrotum were densely adherent and involved

in an inflammatory reaction. When the tunica vaginalis was opened, dark discolored fluid shot forth under considerable pressure; the veins of the pampiniform plexus were dilated, twisted and markedly discolored; the testicle itself was tense, fluctuant, and grayish-black; the epididymis was jet black. The cord structures were ligated as high as possible, and the testicle and epididymis were removed. When the testicle was sectioned, it was noted that the contents were degenerated. Postoperatively, the child did well and made an uneventful recovery.

Comment

In retrospect, it would have been prudent to explore the right half of the scrotum when a diagnosis of testicular torsion was suspected, but it is unlikely that functional testicle could have been salvaged. There seems to be no point in exploring the remaining normal testicle, attempting to affix its position in the scrotum, though it is sometimes recommended[4].

Other types of congenital herniation are absolutely occult until they present as dramatic and perhaps catastrophic clinical pictures.

No. 60599. This seven week old white boy was admitted from the dispensary with respiratory distress as the chief complaint. The child, a full term baby, and normal birth, presented no feeding or other neonatal problem until the day of admission. He woke up at approximately 4:00 a.m., fretful and crying. He would take only small quantities of feeding and regurgitated portions of it. He did not seem to have fever or symptoms of upper respiratory infection. The mother brought the child to the dispensary for examination at approximately 8:00 a.m., January 31, 1954. Examination at this time was not remarkable. The mother thought there was some scrotal enlargement which she had not noted previously. The child's abdomen was flat and soft. Chest examination was essentially normal. The child was sent home with parental instructions that if symptoms worsened to bring the child back for further observation. The child was unable to retain and refused other feedings. In the early afternoon, the mother first noted a grunting labored type of respiration. She returned the baby to the dispensary at approximately 6:00 p.m. At this time the patient had labored respiratory effort with grunting. There was cyanosis of nail beds, although afebrile, the pulse was 150; respirations 40. The trachea was deviated to the right. Examination of the left chest revealed absence of breath sounds and hyperresonance. The heart seemed displaced to the right. The abdomen was soft and empty and there was no apparent tenderness.

Roentgenogram examination, AP in upright position, showed the area with an extreme mediastinal shift to the right. The left lung field was collapsed and the right lung compressed an air-containing viscus appearing in the left chest. A tentative diagnosis was incarcerated diaphragmatic hernia, probably a pleuroperitoneal hiatus defect, so-called Bochdalek's hernia.

While surgery was being prepared, the child was placed in high oxygen atmosphere and his left saphenous vein cannulated with polyethylene tubing for blood transfusion. A No. 12 catheter was placed for naso-gastric suction. In surgery, a left paramedian incision was made. It disclosed incarcerated stomach, small bowel, spleen and pancreas entering the left chest through a large defect in left posterolateral area of diaphragm. The hernia was reduced by slipping the finger through the defect to allow atmospheric pressure into the left chest and then by gentle traction returning first the stomach and small bowel, then the spleen, and finally the body and tail of the pancreas. The outline of the defect was noted, and there was virtually *no* peripheral margin of diaphragm. Therefore, the central portion of the diaphragm was sutured directly to the left posterolateral chest and abdominal wall with two tiers of interrupted 00 black silk sutures.

A small catheter was left in the chest until the closure was completed in an attempt to restore negative pressure to the left pleural cavity. Inspection of the abdominal contents showed the structures to be viable and in essentially normal relationship. The abdomen was closed in layers with interrupted non-absorbable sutures. The abdomen did not seem unduly tense after closure was completed. The child had tolerated the operative

procedure fairly well but still had embarrassed respirations. After thoracentesis was performed in the left side, and 90 cc. of air was withdrawn, breathing immediately improved. Thoracentesis was repeated four hours later and another 15 cc. of air removed. The venous cutdown was preserved for further parenteral feedings. The catheter was left in place for naso-gastric suction, and the child returned to oxygen tent; penicillin 300,000 units b.i.d., and streptomycin 0.5 grams b.i.d. were given postoperatively. The gastric tube was removed after 12 hours, as was the cut-down. The patient became afebrile in 48 hours. The left lung remained expanded, and the patient was removed from oxygen tent in three days. Oral feeding was resumed on third day; glucose and water were increased to skim milk and finally to preoperative formula. The patient had intermittent bounts of feeding distress during the first three days and another on the fifth day, attributed to pharyngitis from the naso-gastric tube. His weight on dismissal was 12 pounds 2 ounces. The laparotomy wound was well healed. The patient was followed through outpatient clinic.

The child is asymptomatic and appears normal one year postoperatively.

Comment

This case was probably a congenital absence of the left posterolateral portion of the diaphragm rather than a true Bochdalek hernia[13]. The abdominal approach proved quite satisfactory for reducing the incarcerated hernial contents and allowed inspection of the abdominal organs for other anomalies. Using thoracotomy for this hernia, Koop and Johnson[6] reported three deaths in 15 cases, but my impression is that thoracotomy would increase the burden of an embarrassed respiration and is therefore undesirable.

Acute Abdominal Conditions

In children, the suspected acute surgical abdomen is often caused by nonsurgical conditions and the offending organ system is distant from the abdomen. Such instances are: acute otitis media, coupled with so-called alimentary intoxication with vomiting and diarrhea; lower lobe pneumonia with abdominal splinting; and acute pharyngitis and cervical lymphadenitis associated with mesenteric lymphadenitis.

1. *Appendicitis.* In children three years of age or less, appendicitis is accompanied by considerable morbidity and mortality. A definite diagnosis of appendicitis on these children is truly difficult, and many of them must be operated on because a diagnosis of appendicitis cannot be eliminated[10]. The inability of the child's peritoneum to consistently wall off a perforation makes appendicitis a deadlier disease in children than in adults. The fulminating nature of this disease is exemplified in this case:

No. 62306. This 10 year old boy was brought to the dispensary on Easter Sunday 1954, complaining of abdominal pain of 24 hours' duration accompanied by nausea and vomiting. Examination revealed an acutely ill white male. There was diffuse abdominal tenderness with signs of peritoneal irritation, direct and rebound tenderness. The abdomen was distended and was without audible bowel sounds. No masses were palpable. The admitting impression of perforating appendicitis and diffuse peritonitis was confirmed by laparotomy shortly after admission. A gangrenous appendix with frank perforation was excised. A large Penrose drain was brought out through a separate stab wound. Culture of peritoneal fluid revealed E. coli, sensitive to terramycin and aureomycin. Supportive therapy included naso-gastric suction, parenteral alimentation, oxygen, and antibiotics. The patient responded well initially. However, after a few days he began to spike fever with complaints of lower abdominal pain and passage of frequent small stools, composed mostly of mucus. Rectal examination revealed an exquisitely tender, fluctuant mass in the Pouch of Douglas, interpreted as pelvic abscess. On April 24, 1954, the patient was returned to surgery where the original wound was reexplored. No abscess was found. The patient's condition continued to deteriorate; and as symptoms and signs continued to point to pelvic abscess, he was again returned to surgery on May 4, 1954, when through a left rectus a large pelvic abscess was evacuated and several large rubber tissue drains were placed in the abcess cavity

and brought out through separate openings. His immediate postoperative condition was critical; but after a prolonged and stormy postoperative course, he made a good recovery.

Comment

The abdominal approach for a pelvic abscess, which was easily palpable through the rectum, is another departure from usual surgical practice in adults. The tender fluctuant mass was probably an abscess, but it could have been an adherent loop of small bowel in an abdomen known to have diffuse peritonitis; and a stab through the rectal mucosa into a loop of distended ileum could have produced a small bowel fistula and cost the boy his life. In this case, a correct diagnosis was established early and simply, but the severe nature of the disease led to protracted and complicated illness.

At other times the physical findings do not support or fit the symptoms; and only after a period of observation with repeated careful physical examinations, rather than reliance on the nurses' notes, will one obtain the correct diagnosis.

No. 65423: A three-year-old white boy admitted September 23, 1954, with complaints of nausea, vomiting and abdominal pain of 12 hours' duration. There was history of antecedent U.R.I. three-four days, which apparently subsided. Examination revealed slight to moderate abdominal tenderness without localization by direct or rectal examination. Bowel sounds were heard. The presumptive diagnosis was mesenteric lymphadenitis. The patient was placed on penicillin therapy and liquid diet. After three day's observation the symptoms were approximately the same, but the vomiting had continued intermittently. The abdomen then appeared distended, and although there was still no localization of tenderness the diagnosis was thought most likely to be appendicitis. On September 25, 1954, the abdomen was explored through a McBurney incision. The RLQ contained only small bowel, but palpation in subhepatic area revealed an indurated, inflammatory mass. The original skin incision was continued upward, and a separate opening was made in fascial and muscle layers. A gangrenous appendix without frank perforation was removed from incompletely rotated bowel which left the cecum in subhepatic position. One Penrose drain was left at the site of appendiceal excision and another placed in the right parvertebral gutter. These drains removed large quantities of purulent material in the first few postoperative days, but the quantity gradually subsided. Antibiotics were given, in addition to other supportive measures. The patient was well on discharge.

Comment

Many persons think that with modern antibiotic therapy the use of drains following appendectomy is unnecessary and, therefore, undesirable. Adequate drains probably saved this second appendectomy from many complications; if multiple drains had been used in the first case, the pelvic abscess probably could have been avoided. I am not advocating the routine use of drains following appendectomy, but I have never regretted their use and many times have wished that I had used one or more.

2. *Complications of Meckel's Diverticulum:* Usually, one diagnoses a Meckel's diverticulum at the time of operation for suspected appendicitis. If the surgeon is sufficiently dissatisfied after finding an innocent appendix, the small bowel is "run" and the embryologic remnant of an omphalomesenteric or vitelline duct may be found—with salvage of the patient.

There are several ways or combination of ways in which a Meckel's diverticulum may become manifest[11]. Simple inflammation produces an appendicitis-like syndrome. Peptic ulceration with complicating hemorrhage or perforation is caused by an aberrant gastric mucosa. Elliott and Evans[3] found heterotopic gastric mucosa in 30 per cent of random Meckel's diverticula removed at autopsy or other abdominal operation; but of all symptomatic Meckel's, 62 per cent contained peptic mucosa, and 85 per cent of these perforated or bled within the first two decades. The simple mechanics of attachment of the diverticulum to the inner surface of the umbilicus or adherence to other parts of the bowel may be the basis for obstruction and/or volvulus of the bowel. Rarely does the diverticulum become the intussusceptum of

an intussusception. It is generally agreed that if the patient's general condition permits, an asymptomatic Meckel's diverticulum encountered at laparotomy should be exercised.

No. 59965: A 19-month-old white boy was first admitted for observation because of fever with vomiting. There was no frank evidence of upper respiratory infection. But the absence of conclusive abdominal findings and the subsidence of vomiting shortly after admission suggested mesenteric lymphadenitis. Roentgenograms of the abdomen and thorax were not diagnostic, and the patient was dismissed the next day. Three weeks later the baby was readmitted because of a bout of hematochezia and vomiting which did not produce blood. The abdomen was tender to palpation, although no definite masses were demonstrated. A tentative diagnosis of Meckel's diverticulum was made. After blood replacement, a laparotomy was performed. A Meckel's diverticulum was found eight inches from ileocecal junction with evidence of recent inflammation and perforation. A small bowel resection was performed with continuity restored by end-to-end anastomosis. The postoperative course was uncomplicated, and the patient made a good recovery. The pathologist reported gastric mucosa in Meckel's diverticulum with peptic ulceration and perforation as source of gastrointestinal hemorrhage.

3. *Intussuseption:* The telescoping of the intussusceptum into the intussusception produces a characteristic if not pathognomonic sympton complex. Typically intussusception occurs in a male infant otherwise in good health, age six months to two years, who has sudden onset of colicky abdominal pain followed by vomiting. Many intussusceptions probably are self-limiting, but others may result in death without surgical intervention.[5]. In 80 per cent of the surgically or roentgenologically diagnosed cases, three of four signs or symptoms are present: (1) excruciating, colicky abdominal pain (90 per cent); (2) vomiting, an early symptom (85 per cent); (3) palpable mass, either abdominally or rectally (85 per cent); (4) fresh blood in the rectum, perhaps found only by examining digit (85 per cent)[4]. A barium enema is usually not necessary for diagnosis, but it can be very helpful in an occasional case if the diagnosis is doubtful, and in many cases is therapeutic.

No. 65730, a previously healthy seven month old white male boy, had onset of colicky abdominal pain followed shortly by vomiting on October 9, 1954. The baby had paroxysms of screaming as if he were in agonizing pain but also periods during which he seemed free of pain and would sleep. He was admitted by the MOD for observation. The baby passed a bloody stool during the night. Examination the next morning revealed an obese male infant who appeared restless and in acute pain. On palpation of the right hemi-abdomen, no definite mass could be outlined, and Dance's sign was negative. Active bowel sounds were heard on auscultating the abdomen. The chest contained normal heart and lungs. The clinical impression was intussusception with possibly intestinal polyps or Meckel's diverticulum. Surgery was prepared for immediate operation in the event of an unreduced intussusception while the patient was moved to x-ray department for a barium enema. The first attempt failed to fill the proximal one-half of the ascending colon. No crescent was outlined, but the child forcibly expelled the barium, which was followed by a moderate quantity of feces and relief for the child. More barium was administered and this time all of the ascending colon and the terminal ileum were filled. Followed expectantly, the child manifested no further symptoms and was dismissed to his home the following day.

Comment

Ravitch[5] at present recommends routine exploration of the ileocolic junction after apparently successful reduction of an intussusception by a barium enema. The parents of this child initially refused any consideration of surgical operation, and after the dramatic relief obtained by expulsion of barium and feces the situation did not seem to warrant exploration.

4. *Congenital Hypertrophic Pyloric Stenosis:* Congenital hypertrophic pyloric stenosis is probably not a true emergency, unless dehydration and loss of electrolytes has ad-

vanced to extreme metabolic derangement. The symptoms of recurrent vomiting are usually present for one to two weeks before diagnosis is established in these sometimes misinterpreted "feeding problems"; and a true emergency is presented by the time the surgeon is asked to see the patient[10]. The diagnosis is not difficult if the possibility is considered and if the case is advanced.

No. 64727. This one month old male infant, second child, first male, was admitted August 19, 1954, with complaints of persistent and repeated emesis of two weeks' duration. The emesis would follow shortly after each feeding, was projectile, and was not mixed with bile or blood. The child seemed well otherwise and was eager to eat immediately after each bout of emesis. The child weighed six pounds, nine ounces at birth, gained to eight pounds, but weighed only seven pounds at the time of admission. Physical examination conducted while bottle feeding revealed an alert but dehydrated male infant. In the epigastrium active peristalic waves were seen passing from left to right. A firm "olive" mass was palpable in the right subcostal area. The child was prepared for surgery by cannulating a vein with polyethylene catheter and giving him 160 cc of five per cent glucose in saline at 25 drops a minute. A small urethral catheter was used to empty the stomach of remaining contents. A Fredet-Ramstedt pylorotomy performed through a Robertson incision. The typical cartilage-like circular musculature of pylorus was incised to the depth of submucosa to allow mucosal pouting through the linear defect. The postoperative course was uncomplicated, and the baby retained all oral feedings after the first postoperative day. He was dismissed to home August 27, 1954.

5. *Omental Infarction:* Segmental torsion and infarction of the greater omentum is infrequent in all age groups and considered rare in children. Mitchner[8] described what he believed to be the second example of this condition found in the less than 20 year age group.

No. 61590. A six-year-old white girl, was seen in the outpatient clinic of 3201st USAF Hospital on March 17, 1954, with complaint of abdominal pain of three days' duration. The pain began in the periumbilical region but seemed to localize in the lower abdomen. She had not vomited but in the past 12 hours was anorexic. Bowel movement was normal. No chills or fever were known to the parents. Temperature was 100° rectally. There was tenderness over the lower abdomen but most exquisite in the right lower quadrant. There was tenderness in both lower quadrants. WBC 18,000. The preoperative diagnosis was acute appendicitis. The abdomen was opened by a McBurney incision. The peritoneal cavity contained serosanguineous fluid, and digital exploration revealed a mass approximately 1.5 cm. in diameter in the right lower quadrant. This was delivered through the wound and found to be omentum, some of which was dark and gangrenous. It was initially interpreted as an attempt by the omentum to wall off an acute appendix. Further investigation revealed this to be a thick edematous segment of an otherwise thin omentum which had become strangulated, evidently by torsion of two thin walled vessels which were the only visible connections of the segment to the remainder of the greater omentum. These vessels were divided and ligated and the infarcted segment removed. A normal appendix was delivered and excised by usual technic. There was no Meckel's diverticulum, neither was there any palpable defect in the deep inguinal ring in which the segment of omentum could have been incarcerated as the basis for this infarction. The abdomen was closed in layers without drains. The convalescence was uncomplicated, and patient was dismissed to her home on the fifth postoperative day.

Comment

Tille[12] summarized all such cases reported in the literature and found appendicitis to be the preoperative diagnosis in the overwhelming majority of cases. It is most unlikely that one will make this diagnosis correctly preoperatively, but such is not necessary for the cure of the patient. What appears essential is for the intellectually honest operator to make a *searching* exploration for the real diagnosis.

Peritonsillar Abscess

The most common diagnosis of after hours visitors is a "bad cold" with a sore throat or other manifestation of upper respiratory infection. Most of these children are treated with uniformly good results. This case is not one of them:

No. 60548: This six-year-old white boy developed a sore throat January 24, 1954, and was treated with intramuscular penicillin for three consecutive days. Instead of symptomatic improvement, the pain and swelling seemed to increase. The patient was dysphagic and running septic fever. He kept his head turned to the left side. There was exquisite tenderness and fullness inferior to the left angle of the mandible. Severe trismus precluded good visualization or palpation of oropharynx, but it was thought the left faucial tonsil was displaced to midline, with edema of soft palate and uvula. The patient was unable to swallow liquids, but there was no obstructive respiratory symptom. A tentative diagnosis of peritonsillar abscess—and possible retropharyngeal abscess—was made. With the patient under general anesthesia and endotracheal intubation, a careful examination of the pharynx was performed, with I and D of the then obvious peritonsillar abscess. A copious flow of pus was obtained from the superior pole of the left tonsil. Culture revealed a Streptococcus organism, sensitive to penicillin in moderate dilution. Antibiotics and parenteral alimentation supplemented local hygiene in postoperative care. The patient was afebrile and taking soft solids on dismissal three days postoperatively.

Comment

The indications for using general anesthesia may be questioned for this case, as most surgical literature specifically states local anesthesia is preferable to preserve the cough and gag reflexes to obviate aspiration pneumonia and lung abscess[7]. As it was impossible to adequately examine this boy, who was as cooperative as any other of this age experiencing pain, it was thought unlikely and dangerous to attempt a blind stab at a pus pocket I could not even see. My decision, to no small degree, was influenced by the presence of an expert anesthesiologist, who could intubate the trachea and preclude most gross particles from the tracheobronchial tree. Two suction tips to aspirate pus at the site of incision gave further comfort. Postoperative studies indicated that our precautionary measures had been successful.

Summary

1. A review of several types of nontraumatic emergencies in pediatric surgery is presented with representative case illustrations.

2. The presentation, frankly incomplete, is void of such important related subjects as tracheo-esophageal fistula, atresia of bowel, malrotation of bowel with volvulus, and myelomeningocoele. None of these entities was recognized at 3201st USAF Hospital during the reported period.

3. Many times the absolute diagnosis could not be established preoperatively; but if the examiner is aware of these possibilities, the correct diagnosis can be made at surgery rather than autopsy.

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REPORT *on* MATERNAL MORTALITY

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During 1952 and 1953 in the State of Oklahoma, there were 72 deaths involving pregnancy or childbirth. Of these, 42 were white women, 21 were Negroes and 9 were Indians. Since there were 101,481 live births in 1952 and 1953, this represents an average maternal mortality rate of 7.1 per 10,000 live births (7.4 and 6.8 respectively for 1952 and 1953.)

On receipt of the death certificates in the State Department of Health, the Director of the Maternal and Child Hygiene mailed questionnaires to the attendants signing the death certificates. The questionnaires are devised to obtain information on the basis of which future maternal deaths may be prevented. The answers are held absolutely confidential; neither the patient's name nor the doctor's name ever appear in print. The patient, as well as the doctor, is known only by a number on the questionnaire.

Because of the large number of questionnaires (14 or 25 per cent) which were returned to the committee in 1951, so completely lacking in clinical details that it was impossible to determine the sequence of events which led to the maternal death or to intelligently determine the cause of death, the questionnaire was revised in 1952 to include more specific questions. Although considerable improvement was obtained, in that only 9 out of 26 questionnaires returned contained insufficient information for assessment, it is felt that more careful recording of pertinent clinical data will result in ever greater improvements in the future.

The Special Committee of the State Medical Association for the study and prevention of Maternal Mortality received returned questionnaires on a total of 56 of these 72 deaths. It is unfortunate that such a large percentage of cases (22.2 per cent) must go unevaluated because of unreturned questionnaires.

Thirty-five of the 56 deaths on which questionnaires were returned were considered by the committee to be preventable. Twelve were considered non-preventable and on nine, the committee was unable to determine preventability.

In the 12 deaths which were judged to be non-preventable, the diagnoses were as follows: Five were due to embolic phenomena (one amniotic fluid embolism proven by autopsy), two probable eclampsia, two abruptio placentae (one with "Couvelaire's uterus" and another with anuria), one coronary thrombosis, one lower nephron nephrosis and one cardiac tamponade following ruptured pericardial vessel.

For the purpose of the study, pregnancies ending between one and 27 weeks are designated as abortion, 28 to 37 weeks as premature birth, and 38 weeks or more as full term births. According to this classification in seven of the 56 cases studied by the committee, the death followed abortion. There were five deaths in the group which

Summary of Findings of Maternal Mortality Study 1952-1953
Prepared by the Maternal Mortality Study Committee of the State Medical Association

Year	Maternal Deaths	Returned Questionnaires	Preventable Deaths	Non-Preventable Deaths	Information Insufficient for Assessment	Deaths Following Abortion	Deaths Following Ectopic Pregnancy	Deaths Following Cesarean Section
1952	37	25	16	5	4	5	2	3
1953	35	31	19	7	5	2	3	2
Total	72	56	35	12	9	7	5	5

followed ectopic pregnancy and five which followed Cesarean section.

In 1952 and 1953, 12 deaths which were thought to be preventable were caused by post-partum hemorrhage alone. In most instances, there was delayed recognition of the severity of the blood loss and failure to replace it with sufficient quantities of whole blood prior to the development of irreversible shock. In other cases, the blood loss was recognized but facilities for making blood available were absent.

There were five cases of puerperal sepsis. four of which followed abortion. In all four of these responsibility was placed upon the patient for having induced the abortion and for having waited until she was past help before seeking competent medical care. In one case, in addition to having septicemia, the patient developed lower nephron nephrosis following a transfusion of incompatible blood.

Seven deaths occurred directly or indirectly as a result of toxemia of pregnancy (eclampsia). In nearly all instances, *inadequate prenatal care*, either because the attending physician failed to provide it or because the patient failed to follow his advice, seemed to be the deciding factor. In many counties, there are health departments with visiting nurses whose aid physicians might enlist in getting these patients to follow instructions. The committee raised the question as to whether this resource is being utilized adequately.

There were two deaths following rupture of the uterus. One followed the use of pitocin during labor and the other followed a difficult version and extraction. In neither of these cases was the committee able because of insufficient information to definitely assess responsibility for the deaths, but ruled that they were preventable.

Inversion of the uterus, with its accompanying hemorrhage and shock accounted for one death. The committee felt that this death was due to an ill-advised major surgical procedure performed before the patient had recovered from the shock and hemorrhage incident to inversion.

In three instances, congestive heart failure without any complicating factor other than pregnancy, resulted in the patient's death. In two of these cases there was a lack of proper attention to the patient's cardiac situation.

One death resulted from a lack of available local hospital facilities for her care. The committee interpreted the information furnished to this effect and felt it was due to the patient's ignorance and the attendant's lack of initiative in seeing that she was taken to a hospital.

The following cases were selected by the committee for publication in the *Journal* in that they present a discussion of problems which the committee feels would be of interest and help to physicians practicing obstetrics. Permission of the attendants for the publication has been obtained through the State Department of Health. For obvious reasons, complete anonymity will be maintained. The comments which follow the case histories represent the opinion of the committee and do not necessarily reflect the attitude of the Editors.

Case No. 97

This patient had been treated by the attendant signing the death certificate following at least four incomplete criminal abortions, self induced, and it was known she had been treated for an equal number by other physicians. She had six living children.

Her response to sulfonamides, transfusions and D & C was satisfactory in the first three. The fourth abortion was markedly septic and transfusions and antibiotics were used. After approximately one month of hospitalization, hemorrhage made D & C mandatory. This was followed by prompt recovery. In her past history there had been no operations other than frequent D & C's. She had had no serious illnesses. Her personal history revealed that she was married, her husband was living and well, and a well-to-do farmer.

At the first visit in this pregnancy the patient reported intermittent vaginal bleeding for three and one-half months. There was an increase in blood flow following coitus. Two days prior to admission the patient had been thrown from a horse and landed on her buttocks, causing considerably more bleeding.

On examination she was found to be profoundly anemic, hemoglobin 5 gms., and the uterus enlarged to the size of a three to four months' pregnancy and contracting, with the passage of blood. Hospitalization was advised but refused.

On the morning of admission to the hospital, it is stated the patient took approximately one teacup of ordinary turpentine by mouth to hasten abortion. The patient denied having visited a professional abortionist or to have done anything but take turpentine to cause an abortion.

Physical examination on admission revealed an acutely ill, white female with a temperature of 102°. There was marked pallor of the skin and mucous membranes. The lungs were clear, the heart was not remarkable. The abdomen was tender to deep palpation in both lower quadrants. Pelvic examination was not done. Rectal examination revealed no abnormalities. The blood pressure was 120/80 on admission. Shortly after admission to the hospital the patient spontaneously aborted what appeared to be a four-five month's fetus. The placenta did not pass. After approximately three hours, bleeding became intense and the patient was taken to the operating room where, under light Vinethene anesthesia, the placenta was easily removed intact with ovum forceps. At that time digital exploration of the uterus revealed it to be intact and clean. Following this the patient received 1,000 cc of type A, Rh positive, compatible, whole blood.

During the following two hours the patient developed mild shock with a blood pressure of 80/60, but she responded with the increase in the amount of blood infused. The uterus remained well contracted under the influence of oxytocics.

The urine specimen taken at the time of admission was normal. At the time of the D & C, urine showed four plus albuminuria and was positive for occult blood.

During the evening following operation, the patient was noticed to be icteric. She was having numerous chills and considerable fever. Venapuncture done during that evening caused a large ecchymosis to be formed there. Hypodermics given for relief of pain left large ecchymotic areas. There had been no urine output since surgery. The following morning she was markedly jaundiced. The blood pressure was 110/70. The uterus was well contracted and the lochia had an intensive, foul odor. Numerous ecchymotic areas were scattered over the entire body. It was the opinion of the attending physician that the patient had a lower nephron syndrome associated with a septic, incomplete abortion and a questionably incompatible blood transfusion.

On that day the patient was re-typed, using another company's typing serum, and found to be Rh negative. Unfortunately, she had received 1,000 cc of Type A, Rh positive blood before this was rechecked. It is stated the first typing serum used was later found to be unreliable. The remainder of the blood given during hospitalization was all A negative. She received a total of eight blood transfusions.

The initial blood count revealed 7 grams of hemoglobin, 3,000,000 red cells and 7,000 white cells. Two days later the hemoglobin was five grams and the red count 2,000,000. The hematocrit was 17 per cent. The icteric index on Ostober 24th was 128 units and during her hospital stay progressively fell to within normal limits. The cephalin flocculation was four plus positive. Blood urea nitrogen was 4.2 mg. per cent on October 24th and varied to as high at 148 mg. per cent. Urinalyses showed two to three plus albuminuria at all times and became progressively alkaline as the illness continued. The output of urine each 24 hours varied from 60 cc. to 5410 cc.

Daily parenteral fluids were given and 300,000 units of aqueous procaine penicillin administered every 12 hours during hospitalization. Ergonovine Malleate was given three times a day during the first three days of hospitalization. Pain was controlled by the administration of demerol.

Consultation was obtained from three physicians. Electrocardiograms were taken daily and none showed any significant alteration in the blood potassium.

On 10th post-operative day the patient became delirious and had marked hallucina-

tions which were associated with a marked bradycardia. Six days later she had two hard convulsions which were partially controlled by the use of intravenous barbiturates. The convulsions continued intermittently for the next two days. The patient expired 24 days after operation in a markedly delirious state. During her hospital stay she was afebrile except for the day of admission when the temperature rose to 102° and before her expiration to 105°.

Autopsy was obtained and was limited to the abdominal cavity. The pathologist's diagnosis was "Lower nephron nephrosis with retained products of conception in the uterus."

Committee's comment—This is apparently a death due to lower nephron nephrosis which developed as the result of administration of incompatible blood. It must be classified as preventable. The factors by which it might have been preventable were certainly beyond the control of the attendant; namely: ignorance of the patient and defective typing sera. The committee agreed that the patient received all the benefits of energetic, enlightened treatment once she came under treatment.

It was suggested by the consultant in pathology that the typing sera should be checked periodically against known cells. This can be done using cells from individuals in the laboratory whose type and Rh are known. This is necessary regardless of the source of the sera because all serum undergoes gradual deterioration.

Apparently the diagnosis of the septic abortion, which appeared on the death certificate, was not confirmed by the autopsy.

Case No. 104

This patient was seen by the attendant signing the death certificate in the second month of pregnancy. She had a history of diabetes since the age of 12 years and was taking 50 units NPH insulin daily. She had never dieted strictly and could not be convinced of the necessity for this.

At the first visit the findings on examination were essentially normal. She would not consent to a vaginal examination and no vaginal examination was done during her prenatal course. Her blood sugar was 140 mgm. per cent, Rh negative, husband's Rh positive, Wassermann negative, blood count normal and urine negative.

During her prenatal course there was evidence of trichomonas vaginalis and of pyelitis on nine of the 25 office visits. She was treated with streptomycin and gantrisin.

On November 13, 1952, the first rise in her blood pressure was noted, being 170/100, and she was advised bed rest. Hospitalization was also advised, but apparently refused until November 22nd, at which time she had edema of the hands and feet, blood pressure 220/100, and complained of headache and blind spells.

Labor began five hours after admission to the hospital and Cesarean section with a low cervical transverse incision, under spinal anesthesia, was performed three hours later. It had been planned to do a Cesarean section on this date. Indications listed were diabetes, toxemia of pregnancy and acute nephritis. The baby was alive and was large, although delivery was three weeks premature. The placenta was delivered manually through the incision. The patient was not in serious condition during the operation.

Following operation repeated blood sugar determinations and urinalyses were done. The diabetes was controlled by intravenous glucose and insulin. No blood transfusions were given, but she received plasma on two occasions. There was no evidence of infection or phlebitis and no elevation of temperature. A consultation was requested because of a "combination of serious circumstances."

Death occurred the third day after admission. No autopsy was obtained.

Committee's comment—This was a death in a 22 year old girl three days following delivery of her first pregnancy by Cesarean section. The indications for the section given by the attendant were diabetes, toxemia of pregnancy and acute nephritis.

The description of the clinical course following the operation was not sufficiently complete to determine the cause of death, or to verify the causes of death as listed on the death certificate. It was stated that her

diabetes was controlled. She was not given blood but did receive plasma on two occasions. There was no evidence of infection. There was a consultation.

It was noted that the diagnosis of shock was included in the causes of death but there was no mention of the patient's blood pressure following operation, nor the amount of bleeding. Since spinal anesthesia was used, blood pressure determinations before, during and after operation should have been particularly important.

The committee considered the patient's lack of cooperation during her pregnancy and felt that she certainly should be charged with some of the liability for her death. However, it had suggestions to make concerning the care which was given the patient by the attendant. No treatment other than bed rest was mentioned before hospitalization. It may have been that the patient refused to take any treament, or, as a matter of fact, it is not known that she even accepted the advice of bed rest. Following hospitalization, the committee felt that it probably would have been better to allow the patient to proceed in labor and determine if pelvic delivery was possible. Since the pregnancy was three weeks prior to term, even in a diabetic the baby might not have been oversize. Present day obstetrics does not as a rule include toxemia per se as an indication for Cesarean section. Likewise, nephritis is not so considered, although the evidence for a positive diagnosis of nephritis was not included in the questionnaire.

If Cesarean section is done in the presence of severe toxemia, spinal anesthesia, because of its potential effect on the blood pressure, is not often the anesthesia of choice. Exceptions are large institutions with experienced personnel providing all safeguards to the patient. Local infiltration anesthesia is preferable.

Diabetes in pregnancy sometimes constitutes an indication for Cesarean section, usually because of the tendency to oversize babies, and the tendency for intrauterine fetal death prior to full term. In those few cases of toxemia of pregnancy where Cesarean section is chosen as the means of terminating the pregnancy, it should only be chosen after a thorough attempt at alleviation of the toxemia for a minimum period of 24 hours.

The committee could not abstain from pointing out in this case that the only treatmen toward the toxemia, which accompanied the diabetes, was immediate Cesarean section. The reason that Cesarean section is not advocated for the interruption of pregnancy in patients with toxemia of pregnancy is the well-known fact that these patients do not stand any operative procedures well, with the resultant marked increase in maternal mortality.

The committee also pointed out that apparently there was some need for blood replacement here, although no blood counts or blood pressure record post-operatively was submitted in the questionnaire. The fact that the patient was given two units of plasma would indicate that there was need for such replacement. The attendant did not mention that whole blood was not available, but he did state on the questionnaire that perhaps a "blood bank might have helped." If this means that whole blood was not available at the institution where the Cesarean section was done, the committee urgently recommends that measures be taken to provide such facilities. Any institution which accepts obstetrical patients, whether they be for Cesarean section or not, should be prepared to give whole blood on short notice.

In summary, the committee's suggestions in this case were as follows: More vigorous treatment of the toxemic manifestations prior to hospitalization. Treatment of the toxemia by conservative medical means after the patient was hospitalized, with no interruption of the spontaneous development of labor. Questioned the use of spinal anesthesia—local preferable (in this case). Making accessible and using suitable quantities of whole blood to replace excessive amounts lost.

As to cause of death, the committee could only verify the diagnoses of diabetes mellitus and toxemia of pregnancy, preeclampsia.

Case No. 132

The summary of this patient furnished by the attendant is reproduced in toto:

This patient was admitted to the hospital, had a spontaneous delivery of a seven months premature infant the next day, and expired 17 days later.

This patient first came to us for prenatal care during her second month of pregnancy. The patient had always enjoyed good health, and examination at the time of the initial visit indicated only normal findings. The patient had undergone an uncomplicated appendectomy and T & A several years previously. She had had the usual childhood diseases. Her weight was 150 pounds and her heart and chest were negative. There was a right McBurney scar. Pelvic examination indicated early pregnancy. No pelvic pathology nor pelvic masses were found on examination. Her Wassermann was negative and her blood pressure 110/70. Blood group was type A, Rh factor positive.

The patient was seen again in one month, at which time her mother suggested that the patient had had an exposure to gonorrhea in the recent past. On examination no clinical evidence of an acute cervicitis was present, but smears were taken nevertheless at this time from the cervix. A few gram-negative extracellular diplococci were found on this smear. At that time the patient was given 600,000 units of penicillin daily for four days.

The patient was admitted to the hospital at the end of seven months having very light and irregular uterine contractions. Her blood pressure at this time was 120/80, her weight was 157½ pounds. Albumin and sugar were negative on urinalysis, and the hemoglobin was 87 per cent. She had shown no excessive weight gain or peripheral edema. The next morning her labor became active, her cervix dilated rapidly, and she had a spontaneous delivery after only six hours of active labor. No episiotomy was required, and the patient received only nitrous oxide and oxygen at the time of delivery. She had been previously sedated with 100 mg. of demerol and 1/150 gr. of scopolamine. During her course of active labor, before being well sedated, the patient had complained of having more aching on the right side of her uterus than in the midline or in the back. The placenta and membranes were expressed complete a few moments after delivery and total blood loss was less than 100 cc. Postpartum blood pressure was 120/70. The first 12 hours postpartum course was uncomplicated, except that the patient showed tenderness to palpation in the right lower quadrant almost immediately after delivery.

Twenty-four hours after delivery the patient was seen by an obstetrical counsultant, who noted that the patient complained of pain in the right lower quadrant unless she lay very quietly. The patient declined food, her temperature was 100, pulse 100. The uterus was firm; the lochia was normal. There was tenderness to palpation in the right lower quadrant just to the right of the uterus. This tenderness was also present over the right kidney. No spasm was present. Urinalysis was negative, and KUB was negative. The patient was started on terramycin orally. During the day the patient's temperature rose steadily to 103 degrees by mouth. Her pain localized to an area at the right cornu of the uterus with right kidney tenderness of a marked degree. There was no distention, rigidity or spasm of the abdomen. Examination of her legs was negative. She also complained of some dysuria, and an intravenous pyelogram done that day showed function on both sides. The patient was seen in consultation by a urologist and a general surgeon on that day but it was thought that there was no definite evidence of acute abdomen.

The following day a sterile vaginal examination showed no evidence of vaginal or cervical injury. No hematomas were felt. There was no palpable mass or tenderness in the cul-de-sac. No palpable mass in either fornix. On bimanual pelvic examination, there was marked tenderness near the right cornu of the uterus; the same was found on abdominal palpation. No definite induration or mass could be felt, however. The patient was seen again in consultation by the general surgeon and obstetrician. At this time the white count had increased from 16,000 to 24,000 with 89 per cent polys. A catheterized urine specimen was negative. Flat plate of the abdomen revealed questionable loops of small bowel that were distended. Since abdominal findings persisted, with marked tenderness to the right of the uterus and with

the increase of the white count, it was thought that either an intestinal obstruction or an abscess in the area of the right broad ligament could not be ruled out.

Forty-eight hours after delivery an exploratory laparotomy was performed under general anesthesia. At this time the right tube was swollen, hard and edematous, with inflammatory process extending up the right ovarian ligament. Gross diagnosis in the operating room was in error. A right salpingectomy was done. The left tube and ovary were normal. No adhesions were found. The specimen was opened in the operating room and a culture obtained. Fimbriated end of the tube was closed. No growth was ever obtained from the culture. The pathologist reported the specimen as an oviduct with hemorrhage and acute inflammation. Subsequently this report was found to be in error and review of the cut sections two weeks later, when the patient had developed bilateral thrombophlebitis of the lower extremities, revealed the normal lumen of the right tube in proximity to the vein which had contained a large thrombus. The correct pathology report originally should have been right pelvic thrombophlebitis with normal tube. It had been noted at the time of the operation that the inflammatory process extended up the right ovarian ligament and probably up the right ovarian vein to the area of the right kidney, which would have accounted for the tenderness over the right renal area.

Following the operation, the patient ran a septic course for two weeks, during which time she received large doses of penicillin and dihydrostreptomycin. Terramycin was started orally.

On 18th post-partum day, the patient suddenly developed marked edema of both legs and thighs. There was severe tenderness in both calves, thighs and groin. No abdominal masses were palpable. At this time the patient was unable to move the lower extremities without severe pain, and a diagnosis of pelvic thrombophlebitis of the lower extremities and pelvic veins with possible extension to the vena cava was made. There was no chest pain or cough, and the chest was clear on examination. The patient was seen in consultation by an internist, surgeon, obstetrician, and general surgeon. At this time the findings were somewhat more marked in the left leg rather than in the right; however, Homans' sign was positive bilaterally. Due to the extensive involvement, it was thought that a ligation of the vena cava was indicated at once. The patient was given a spinal anesthesia of procaine 100 mgs. and pontocaine 12 mgs. and expired on the operating table 15 minutes later due to cardiac arrest before an incision could be made. The usual measures including introduction of an endotracheal tube with controlled respiration and cardiac massage were without avail.

Conclusion

It is our impression that this patient developed right pelvic thrombophlebitis at the time of delivery, either immediately before or afterwards. The patient was still afebrile 12 hours after delivery. Pathology report on the specimen two days after delivery at time of the operation was misleading. A correct diagnosis at this time would have certainly altered our course of treatment. No anticoagulants were administered during the next two weeks when they would have probably been indicated. The immediate cause of death could have been due to cardiac arrest from the spinal anesthesia, or could have resulted from a pulmonary embolus. No autopsy was obtained.

Committee's comment — The committee was largely in agreement with the conclusion of the attendant, in that the patient's death was due to the pelvic thrombophlebitis on the right side which developed incident to delivery. It agreed also that a correct diagnosis at the time of operation two days postpartum would have altered the course of treatment and might have prevented the patient's death. The committee speculated upon the possibility that there was latent infection in the parametrium from the pelvic infection which was diagnosed early in the pregnancy.

The committee felt that this death may have been preventable but that the factors which would have been operative in its prevention were beyond the control of the attending physician.

Case No. 131

This patient was first seen by the attendant signing the death certificate in the ninth month of her pregnancy, about two weeks prior to death, which occurred on the estimated date of confinement. No results of this examination are given in the questionnaire. The Wasserman was reported as negative. The patient had had no prenatal care previously. It is stated that the membranes ruptured seven days before the birth of the baby and the attending physician was not called at that time.

She was admitted as a charity patient. Labor was quite long, approximately 60 hours, with irregular contractions and extreme back pain. Demerol, 700 mgs., spaced over a three day period, was given to lessen labor pains, with benzedrine, 5 mgs. added to each dose of demerol. One vaginal examination was done under sterile precautions prior to delivery. Under nupercaine spinal block (low) 2.5 mgm., the child delivered spontaneously without the use of forceps and was stillborn. The patient was very exhausted, lost a considerable amount of blood and the blood pressure was unobtainable. The placenta was delivered and the episiotomy was repaired. The patient had excessive bleeding immediately postpartum and her condition was quite poor prior to this. She had several convulsive seizures following delivery. Consultation was obtained with other staff members because of the prolonged labor and exhaustion of the patient.

The consultant who examined the patient prior to delivery stated in the questionnaire that the heart and lungs were normal, abdominal examination revealed a full term pregnancy, the patient's weight was given as 232 pounds, blood pressure 125/80. The pelvic measurements by two other staff doctors were determined to be adequate. Urinalysis showed a trace of albumin, microscopic examination revealed 10 w.b.c., occasional r.b.c. The white blood count was 8,800, red blood count, 4.04 million. The consultant stated the labor was prolonged because of the patient's obesity, relative dystocia due to a large baby and a minimally adequate birth canal.

The patient expired about 50 minutes after delivery. No autopsy was obtained.

Committee's comment — The committee ruled that this was a preventable death and that there were three factors or phases in the patient's management which might have operated to prevent the death. In the first place, the patient had no prenatal care. This may have been, and probably was, her own responsibility and was due, probably, to ignorance. In the second place, she apparently was neglected during a very long and difficult labor, during which time the baby died (although it was not stated for certain that the baby was alive at the beginning of delivery, it was stated that the membranes had been ruptured for one week prior to the onset of labor.) Neglect during labor was manifested by failure to support the patient adequately with parenteral fluids. The attendant himself stated that if he had to do it over again he would have given the patient such support during her labor. It is hard for the committee to understand how a patient could be followed in labor and given sedation to the amount of 700 milligrams of demerol without any attention being given to the patient's fluid balance. The third phase in which prevention might have saved the patient's life was immediately postpartum, when it was stated that she was extremely exhausted, had lost considerable blood and that the blood pressure was unobtainable. In the face of all this there was no attempt at replacement of blood or even plasma or glucose. With such prolonged labor, even though she were making adequate progress during the labor and an uncomplicated delivery was anticipated, ordinary caution would have dictated the preparation of blood for transfusion or some type of fluid replacement, even if blood was not required.

The committee noted that the institution in which the patient was cared for was one where obstetrical patients are cared for regularly. Any institution which admits patients for obstetrical care must be equipped and prepared at all times to give whole blood, as well as other parenteral fluids, and the attendants who are responsible for the patients in these institutions must be ever alert to the necessity for these supportive measures. As long as these things are disregarded, needless loss of life of mothers and babies will continue.

General Hypertrophic OSTEOARTHROPATHY

Wm. S. PUGSLEY, M.D.

From the time of Hippocrates clubbing of the fingers has been recognized as an interesting and sometimes helpful finding in certain cases of chronic pulmonary or cardiac disease. Many studies have been made on the subject, but no satisfactory explanation of the phenomenon has been found.

In discussing acromegaly in 1889, Bamberger mentioned a condition related to hippocratic clubbing as one of those to be considered in the differential diagnosis of acromegaly. Marie described this interesting condition again in 1890 and named it hypertrophic osteoarthropathy, but organized studies of this disorder are infrequent even to the present time. Only in recent years have case reports appeared in the literature with increasing frequency. One may hope that the increasing literature on the subject heralds a general recognition of the condition among practicing physicians.

Although some have considered it related to simple clubbing, hypertrophic osteoarthropathy assumes a much more commanding posture in its clinical aspects. It is severe and tremendously painful in some patients and is invaluable in foretelling of pulmonary malignancy in some instances months before such a lesion is detectable on radiologic examination.

Let us look closer at this fascinating condition. Marie's original description of 1890 need not be changed. "It is symmetrical osteitis of the four limbs, chiefly localized to the phalanges and terminal epiphyses of the long bones of the forearms and legs, sometimes extending to the roots of the limbs and flat bones and accompanied by a dorsal kyphosis and some affection of the joints."

In elaborating on this description one should emphasize that cases of hypertrophic osteoarthropathy are known to present themselves in any of several ways but most often with either (1) the appearance of clubbing itself, (2) pain and tenderness along the extremities, (3) stiffness and tenderness on movement of the peripheral joints, or (4) advanced periosteal lesions without symptoms. One can easily see the possibilities of confusing this syndrome with rheumatoid arthritis or some forms of degenerative joint disease. There is an interesting and helpful observation regarding the appearance of the painful, acute form of the disease. The great majority of such cases (99 per cent according to one author) seem to be secondary to carcinoma of the lung, whereas the less severe or asymptomatic forms are more often related to other conditions, such as suppurative pulmonary disease or congenital heart disease.

THE AUTHOR

William Pugsley, M.D., Oklahoma City physician who wrote "General Hypertrophic Osteoarthropathy," was graduated from the University of Oklahoma School of Medicine in 1945. He interned at Augustana Hospital, Chicago, and served internal medicine and pathology residencies at the V. A. Hospital, Oklahoma City, and Cedars of Lebanon, Los Angeles.

To increase our familiarity with the clinical picture we may briefly look at four typical cases—one reported by Dutoit[1], two reported by Pattison[2], and one seen at the Oklahoma City Clinic (case 4).

Case 1[1]. A white man, age 40, had progressive bilateral swelling of the ankles. One month after onset the patient developed pain, tenderness, slight swelling and warmth of both knees. The pain was aggravated by movement of the joints. Roentgenograms showed clubbing but no chest lesion. Five months after onset the patient began having pain in the right hip and thigh which later proved to be due to metastases. Five and one-half months after onset there occurred severe hemoptysis and intermittent pain in the shoulder. Roentgenograms showed a lung lesion which later proved to be an adenocarcinoma.

Case 2[2]. A white man, age 52, experienced pain and swelling of the hands and feet, later his knees, hips, and shoulders became similarly involved. Five months later he developed hard, painful breasts and lost 25 pounds weight despite a good appetite. There were no significant symptoms refer-

able to his chest. A tentative diagnosis of acromegaly was made on admission. The sedimentation rate was rapid (figure was not given), and chest roentgenogram eight months after onset showed a lesion in the upper one-third of the right lung, later found to be a carcinoma which was not classified.

Case 3[2]. A white man, age 51, who had a questionably productive cough for three years, began experiencing swelling and pain in both ankles and legs. A month later he began to exhibit symptoms of tumor of the frontal lobe. Three months after onset of ankle and leg pain the patient was found on examination to have clubbing of the fingers and toes, and tenderness to pressure over the distal tibiae. A chest lesion (later proved to be a bronchogenic carcinoma) was seen on roentgenogram and periosteal proliferation of fibulae, tibiae, radii were found.

Case 4. A white man, age 55, was first seen in July, 1953, had had hemoptysis for the past five days and had had bouts of coughing during this time. No pain, fever, nor pedal edema had been noted. The patient had smoked two packages of cigarettes daily for years and had been a rather heavy drinker. Blood pressure was 230/120. A roentgenogram showed infiltration in the left upper chest which was thought to be probably early tuberculosis. "Doubtful" acid fast bacilli were reported on one smear. Cultures were negative. Further studies by a phthisologist failed to confirm the presence of tuberculosis, and recurrent hemoptysis at rare intervals seemed to be associated with hypertension which was higher than usual.

One year after the onset of the first hemoptysis the patient returned to this clinic because of urticaria. This improved under treatment with cortisone. Blood pressure at that time was found to be 120/80 (an unexplained drop from the previous sustained elevation of 230/120 the year before and 212/126 in 1944). It remained at 100-120 systolic thereafter. Two weeks after the onset of urticaria, the patient began to have "tremendous aching" in the lower legs in the afternoons and evenings after he had been on his feet much. Examination showed 1-2+ pitting edema of the lower legs extending two-thirds of the way to the knees. Definite clubbing of the fingers and toes was evident. The feet appeared warm and dusky. Urticarial lesions of the lower legs and wrists recurred. On cortisone therapy (25 mg. I.M. daily) the aching in the legs diminished within a few hours and the skin lesions subsided. Aching of the extremities varied with cortisone therapy but was still evident until the time of operation. Typical periosteal new-bone formation was noted radiologically along the tibiae and fibulae. Six weeks after the onset of the aching in the legs the patient underwent a palliative left pneumonectomy for bronchogenic carcinoma involving the left upper lobe and the thoracic wall. The morning after the operation the patient felt that his legs were completely comfortable for the first time in weeks. The post-operative course was complicated by an empyema during which he exhibited acute adrenal insufficiency which responded dramatically to cortisone intramuscularly. No further aching in the legs occurred. Postoperative irradiation was given, but the patient continued downhill and expired five weeks after surgical intervention. Postmorten examination confirmed the presence of extensive visceral metastases. Complete carcinomatous replacement of the right adrenal incidentally suggested a basis for the relative hypotension.

The main symptoms and signs of pulmonary osteoarthropathy consist of the following: (1) painful swelling of the extremities, particularly the distal or more dependent portions, with edema and hypertrophy of the subcutaneous tissue; (2) joint involvement including pain, swelling, stiffness and sometimes redness; (3) clubbing of the fingers and toes; (4) muscular weakness; (5) burning sensation and increased sweating of the hands and feet; and, occasionally, (6) unequivocal gynecomastia.

The pain in the extremities in case 4 was related to posture and was so intense that it kept the patient from being on his feet for more than a few hours at a time. It was reminiscent of the pain of an abscess of a terminal fat pad of a finger, relieved by elevation and accentuated by dependency. It was associated with a congestive type of bluish-red cyanosis, engorged veins, and edema, suggesting initially some blocking of the vena cava.

Roentgenographic findings are usually typical. Swelling of the soft tissues is seen in the fingers and toes with clubbing, although this is not a constant feature. In some instances tufting of the terminal phalanges is indistinguishable from that seen in acromegaly. Periosteal new-bone formation is primarily in the long bones of the extremities, usually first along the distal third of the forearms and the legs below the knees. Later there is involvement of the proximal portions of these bones, then the lower ends of the femora and humeri and lastly, the small bones of the hands and feet. Periosteal changes diminish near the expanded ends of the diaphyses. New bone is first deposited on the dorsal or extensor surfaces, and the greatest involvement remains in these areas. There have been only a few cases in which roentgenological evidence of resorption of the newly formed bone has occurred. At this clinic we have seen one such case of rheumatoid arthritis with asymptomatic osteoarthropathy in which, after three months of symptomatic treatment for arthritis, the bone changes seem to be regressing radiologically without appearance of a pulmonary lesion. Pathologic studies add evidence of inflammatory and degenerative changes in the joint capsules themselves to those changes of periosteal new-bone formation along the shafts of the long bones.

The course of this syndrome may be quite variable; it ranges from a slow asymptomatic process to a rapid, excruciatingly painful involvement of the extremities and tenderness of the breasts. In one study[3] of 14 patients with general osteoarthropathy secondary to carcinoma of the lung, the first complaint of any type in all 14 was referable to painful joints. In 5, cough developed within three months of the joint pain. Clubbing of the fingers was present in all 14. The absence of clubbing, it should be noted, does not exclude a diagnosis of general osteoarthropathy. In some studies, eight out of 10 patients had joint pains two to four months before clubbing appeared. The symptoms of the acute or rapid form may frequently be intermingled with those of metastases to the skeletal or central nervous system. In severe cases the course usually parallels or overshadows the progress of the primary disease.

Several means recorded in the literature are effective in terminating or interrupting the relentless progress of this condition. The most effective means of attack is to remove the offending lesion surgically if such is feasible. Almost without exception patients who have suffered uncontrolled distress for months have awakened the day after operation and found their extremities completely comfortable. Roentgen therapy of susceptible neoplasms may result in similar relief, but palliative radiotherapy of inoperable lesions is usually of no avail. Specific therapy of other primary disease, such as initiating chemotherapy in cases of subacute bacterial endocarditis[4], or surgical amelioration of congenital heart disease associated with osteoarthropathy, may offer striking and rapid relief.

A few other instances of relief from the pain of this condition are of more academic than practical interest thus far. Some patients undergoing exploratory thoracotomy obtain relief, although the lesions are found inoperable. Experimental procedures, such as denervating the involved lung or merely ligating the corresponding pulmonary artery, have been reported effective.

The incidence of general osteoarthropathy was reported in one surgeon's experience to be about two per cent of his cases of lung carcinoma[5]. A study of 139 cases of lung cancer revealed an incidence of no less than 10 per cent[3]. Osteoarthropathy seems to appear most prominently before middle life and affects males eight times as frequently as females. There was no apparent relationship to the size of the tumor nor the type of malignancy in one study. Almost all lung tumors were located peripherally and in very few was it visualized by bronchoscopy at first.

We shall see that although many pieces of the current puzzle have been found, they have not as yet been fitted together in a manner suitable to include them all. The list of conditions which have been associated with osteoarthropathy is formidable, and its diversity is almost amusing. It has been noted that the great majority of primary

conditions are affections of the viscera, usually of the thoracic cavity and usually pulmonary, but here generalizations cease. A partial list of conditions would include carcinoma of the lung and other intrathoracic malignancies, bronchiectasis, lung abscess, empyema, tuberculosis, congenital heart disease, subacute bacterial endocarditis, biliary cirrhosis, ulcerative or amebic colitis, rectal strictures, pyloric obstruction, sprue, myxedema, polyposis of the colon, carcinoma of the nasopharynx, carcinoma of the thymus, leukemia, and polycythemia vera.

At least for the present we can dismiss any hope of arriving at a common denominator for this list of conditions and thereby the solution of the pathogenesis of general osteoarthropathy. But, although the final answer is not known, a number of fascinating clues have been found.

Well known studies on circulatory changes in the fingers have shown that the blood flow is increased in acquired clubbing, whereas in the congenital form no circulatory changes at the finger tips are seen[6].

The increased sludging and rouleaux formation in most diseases associated with osteoarthropathy tend to decrease oxygenation of the tissues, and increased peripheral blood flow may be an attempt at compensation. Anoxia certainly seems to have some role to play. The only successful surgical reproduction of osteoarthropathy in animals has been by anastomosis of a branch of the pulmonary artery to the left auricular appendage to establish a degree of chronic anoxia. A corollary of this experiment is noted in the report of a patient with tetralogy of Fallot who was operated on and in whom the associated osteoarthropathy was promptly improved by the increased oxygenation[7].

Hydrostatic factors and edema also seem to have a significant place in the condition as evidenced by the pain produced by dependency and relieved by elevation of the extremities. The initial distribution of the periosteal lesions is toward the distal or dependent portions of the extremities, and gross and microscopic studies show edema in the periosteum and involved soft tissues. One may surmise that a possible casual relationship exists among tissue anoxia, increased peripheral circulation, gross and microscopic edema and the bony changes secondary to periosteal proliferation.

Another interesting facet of the problem of pathogenesis is the possible endocrine involvement. Some cases of osteoarthropathy are notable in their clinical resemblance to acromegaly in which the patient has elephant-like feet, spade-like hands, prominent malar bones and tufting of the terminal phalanges. Another finding that can hardly be accounted for on any basis other than endocrine is that of bilateral unequivocal gynecomastia, no rarity though perhaps less common than some other features of osteoarthropathy. Eosinophilic hyperplasia[8] and even basophilic adenomata have been described in pituitaries of patients with osteoarthropathy. Multiple cysts of the adrenal cortex were associated with pituitary eosinophilic hyperplasia in one case. In at least one case osteoarthropathy has occurred after surgical intervention for hyperthyroidism which was followed by hypothyroidism and progressive exophthalmos.

These observations may be assembled at some time in the future to complete a well-integrated concept of general hypertrophic osteoarthropathy, but even now the knowledge available can be extremely helpful in differentiating cases of acute bone and joint disease susceptible in some instances to dramatic cure.

Perhaps even more important to re-emphasize is the observation that many of the cases present joint symptoms months *before* pulmonary symptoms or the radiologic appearance of lung cancer.

(I wish to express appreciation to Dr. Edmond H. Kalmon for his helpful criticism of this paper.)

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Special Article

Preparation and Presentation of MEDICAL TESTIMONY

CLAYTON B. PIERCE

THE AUTHOR

Mr. Clayton B. Pierce is a practicing attorney in Oklahoma City. His paper on the preparation and presentation of medical testimony is an abstract of a speech given before a combined meeting of the Carter County Bar Association and the Carter-Love-Marshall Medical Society and its publication was suggested by Roger Reid, M.D., Ardmore.

For a long time a number of aspects of this subject have been of great concern to me so I welcome the opportunity to present my thoughts on them to a combined group of lawyers and doctors.

Everyone here is necessarily aware that medical evidence assumes a vital role in many fields of law. For some 35 years my law practice has been closely associated with the litigation arising from personal injuries and this experience will be the basis for my speech.

Trial procedures are alien and maybe even repulsive to physicians who are accustomed to making their own investigations in manners of their own choosing, to obtain what they believe to be the truth. Their opinions thus formed are listened to with deference and respect. When a doctor appears in a courtroom it is a different proposition. He is not permitted to ask pertinent questions, nor express an opinion freely; he is ordered when to speak and when not to speak. He may be asked to express an opinion on some hypothetical question, when he considers the statement of facts entirely distorted. He must state his opinion and instead of having his views received with the customary deference and respect, is disconcerted to find his motives, his professional competence and even his intelligence impugned; his pronouncements are misstated and maybe twisted into absurdities.

Thus we lawyers ought not to wonder why physicians usually dislike and even resent the role of medical witness. The trial lawyer, therefore, has a problem as he is vitally interested in presenting his client's case in its most favorable light. There is but one cure for this undesirable state of affairs and it can be summarized in two words: "Cooperation" and "preparation."

Every lawyer here knows there can be no hard and fast rules for contesting the medical claims to be offered by the opposition nor in assembling and presenting the medical evidence in favor of his client's case. He also knows that the effort required to produce medical evidence varies with the case. However, it is his duty and obligation to gather evidence and to present it to the end that justice might prevail.

We lawyers must realize that it is unfair to the prospective medical witness and possibly may be utterly devastating to the right of our clients for a lawyer to take medical evidence and present it without proper preparation and a consultation with each prospective medical witness.

To illustrate: Some time ago, I represented an employer who was being held legally responsible for the development of a heart condition in an employee. The opposing counsel was attempting to establish that heart failure developed due to a specific cause on a specific date for which my client was legally responsible. Apparently relying wholly upon the patient's statements and without consulting the attending physician, he called the doctor as a witness. A year had passed since the fatality and about two years

had transpired since the events alleged to be the cause of the heart failure. On direct examination as to the cause of the fatality, the doctor assigned it to the cause for which my client was being considered as legally responsible. On cross examination, I obtained his office notes from which he had been refreshing his memory. From them I was able to show that for over a period of approximately nine years there had been present symptoms commonly associated with chronic heart disease.

The preparation by trial lawyer was inadequate and thus was grossly unfair to the medical witness. Had there been consultation beforehand this situation would not have been created.

A doctor may be called upon to serve in either of three roles: (1) Attending physician, (2) Examining physician, and (3) the so-called "Medical Expert".

Obviously, the preparation of medical evidence for each of these three roles assumes very different characteristics. First, the attending physician whose testimony is of transcending importance. He has taken care of the patient before the lawyer came into the picture and he probably paid little or no attention to some details which were not connected with the patient's cure, but which may become important at a later date. So it is very important to the three, the lawyer, the doctor and their common client and patient that they have a consultation before the doctor gets on the stand to testify.

Secondly, when the doctor is called upon to act as examining physician he is the one who had nothing to do with the care and treatment of the patient prior to the event of the patient's appearance for examination. Now we must admit that regardless of their skill in the art and science of medicine, doctors vary as do other men in their qualifications as salesmen of ideas and that is what a witness is. A lawyer choosing or recommending a doctor must bear that qualification in mind.

Every physician before he makes an examination, takes a history. He has to know what he is looking for and what he is going after. He usually has only an hour or two in which to make the examination, rarely does he devote a full day to it. This history provides a lead and you physicians, when called upon to make an examination, must treat that history as a lead. Ordinarily the patient coming in for treatment tells the truth. He does not exaggerate, does not concede, because he wants a cure. But coming in as a suitor for damages or compensation, he may or may not give, nor desire to give you, the entire history. Also, he may have reached up some information which permits him to suggest fields of distress that are possibly fabricated for his own gain. Therefore, do not consider the history sacrosanct but view it rather coldly for reasons just stated.

It seems desirable to me and I recommend it as good practice for the trial lawyer to furnish the examining physician with all the story he has in his possession whether the examination is his own plan or not. If it is too complicated to furnish copies of statements, reports, etc., prepare a simple statement, a page or two, which can be read quickly and give the doctor your side and thus provide another lead to fall on. Even if the person to be examined is your own client, the examiner should not only know his side but should know what prepositions he may be cross examined upon and thus be prepared for most of the inevitable questions which may destroy his effectiveness or ruin the client's case.

Lawyers, if you are defending the case it seems to me that sending a client, or the opposing witness, to a doctor just "cold" is pretty nearly as bad as not having him examined at all. After every examination there should be a conference between the lawyer and the doctor. The trial lawyer should know how the doctor is going to answer the questions either side may ask. The doctor should point out what he considers to be strong and weak points in the case: X-Rays, laboratory reports, and hospital records should be examined and discussed.

In the third role we have the doctor as the so-called medical expert. He is the physician who has neither examined nor attended the client or opposing party but is testifying from a state of facts known in law as a hypothetical question.

Now I'll say to you doctors, many law writers today are challenging the practice of limiting the testimony and opinion of experts to a certain statement of facts contained in the question submitted. Professor Wigmore, a recognized authority on evidence, is one who is challenging the basic logic of such procedure. In Oklahoma, at this time anyway, it is the law and it is vitally important to the party's attack upon the hypothetical questions. The facts supporting the question must be related to the jury and unless the expert explains the process of analysis and reasoning by which he reached his conclusions, the jury must take or refuse to take the conclusion that he has stated simply because he said so. You will recognize immediately that where there is opinion evidence to the contrary, the trial lawyer cannot expect the witness' opinion merely on the basis of his qualifications.

Now I come to a matter which must be discussed in perfect frankness: it has to do with the consultation between the trial lawyer and the prospective medical witness. I conceive it to be a source of some irritation and lack of cooperation between the two professions so I would like to make some suggestions.

First, when a physician's testimony is of such importance that a consultation is required, the doctor should be paid for his time just as he would be paid for a consultation with another physician about a patient.

Secondly, the lawyer should make arrangements for a time in keeping with the doctor's schedule of appointments. Rather than pop into the doctor's office at a very busy time and expect him to discuss his proposed testimony, wouldn't it be more advantageous to arrange a time either before or after office hours, or even in an evening?

Thirdly, on the other side, the doctor should remember a lawyer's time, too, is valuable, so when he arranges an appointment for a certain hour, emergencies excepted, the lawyer should be seen at that time. It seems to me very discourteous for one professional man to waste another's time; each should endeavor to conserve the other's time.

Now about this consultation and what it composes. Obviously it should cover every phase of the medical questions involved. I think the lawyer should inform the doctor about the theories to be offered by the opposing side, then the doctor may be helpful in suggesting inaccuracies which may exist. On the other hand, legal issues that arise out of the medical evidence should be explained to the doctor. If this is done it may prevent disastrous results on cross-examination and sometimes on direct examination.

For example, in considering mental competency, what should a person possess in order to execute a valid will? It is not sufficient that the individual understand the value of his acts and be able to distinguish right from wrong. Doctors should know that the person who has the mental competency to make a will must know the value and content of his property, also he must know the persons upon whom his bounty would fall. These two things are most important as far as mental competency is concerned.

Another case to illustrate why it is important to talk over the legal aspects with the doctor. It, if you will pardon me, is a personal reference. I had spent a lot of time with my witness, a heart specialist, and upon at least four or five occasions, had gone over the facts I assumed would be proven by myself and the opposing counsel. The physician had repeatedly assured me that the facts which I intended to establish and to have him express an opinion could not have caused the man's condition. On the witness stand I carefully qualified him, I really built him up, presented the facts, then asked him if he had an opinion as to the cause of the condition. He replied he had an opinion, and when I asked him as to the cause, and with proper solemnity he said, "Why, no, certainly not, Mr. Pierce, certainly not. It could not have caused it." Then he added, "But it might have aggravated it!"

Aggravation had not been in the lawsuit up until that moment, but it surely was from then on. That response ruined my case, and the failure was chargeable to me because I had omitted to discuss the significance of aggravation.

One of the most important efforts that a

(Continued on Page 280)

Association Activities

PRESIDENT'S LETTER

By being president of the Oklahoma State Medical Association, one soon learns if he did not know before, that the members of the profession and those non member employees of the medical profession in Oklahoma are the most willing and cooperative workers one could find anywhere.

Most of us have known that our executive secretarial staff has been diligently active and most helpful, really indispensable. Our organization in this category suffered a very great loss when our associate executive secretary, John Hart, resigned to become the first executive secretary for the National Orthopaedic Association with offices in Chicago. Everyone who knows John and of the work he did for the Oklahoma State Medical Association regretted seeing him leave but by the same token of appreciation could not, nor would not, ask him to forego such a promotion.

The problems of the Oklahoma State Medical Association at the national level, and there are many, have been so ably handled by our delegates, Dr. John Burton of Oklahoma City and Dr. James Stevenson of Tulsa with their alternates, Dr. Malcom Phelps of El Reno and Dr. E. H. Shuller of McAlester, respectively. It has been a very great pleasure to watch these men in the national meetings assiduously meet the ever increasing number of problems confronting the American Medical Association House of Delegates.

Our delegates, Doctor Burton who has been active in the State organization for several years and our national delegate for six years and Doctor Stevenson who likewise has always been a staunch worker for organized medicine in Oklahoma, is past president, and than whom probably no one else has contributed more to the profession, command attention and recognition. Their national committee work attest to these facts but aside from the published committee work, one has to see their constant presence, thinking and action in the meetings to fully appreciate their work and know that our problems at national level will not be mishandled.

To have the representation we have for the questions handled at the national level—questions that affect directly or indirectly each of us—and to find so many members willing to go the second mile to be helpful. These and many other organizational assets make your president ever humble and most grateful.

R. Q. Goodwin

President

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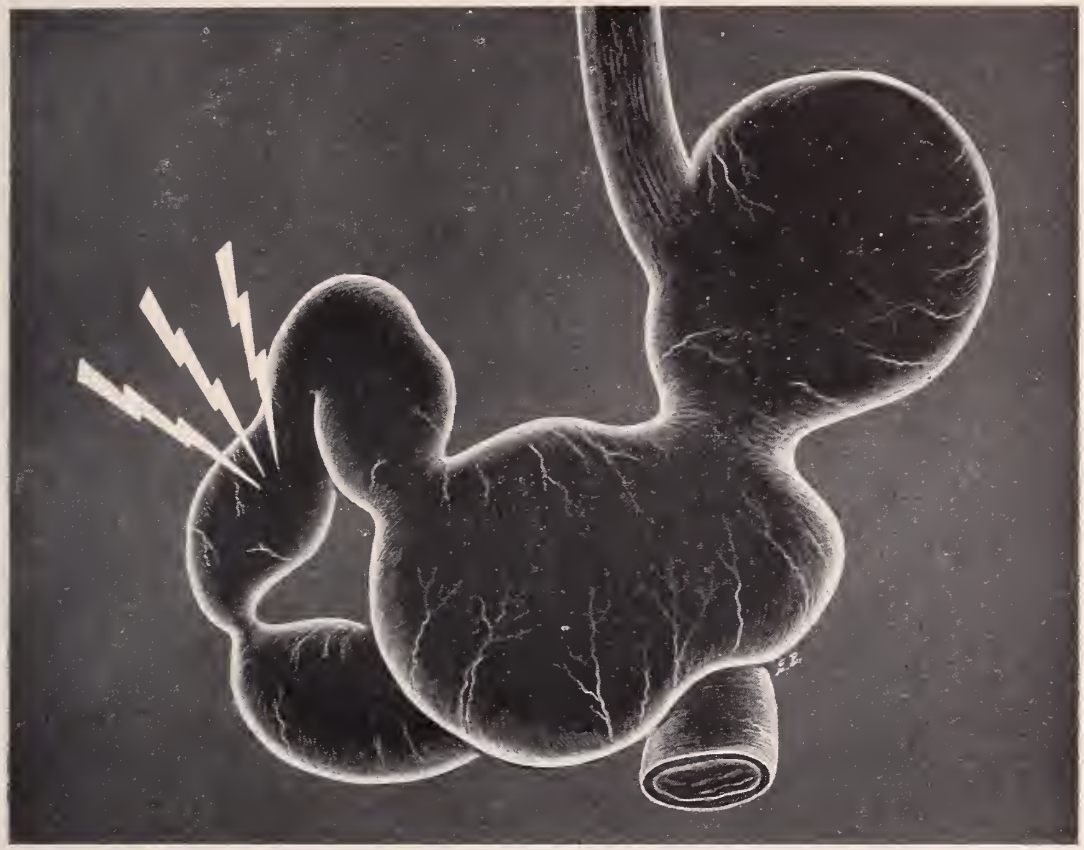

Abnormal Motility as the Cause of Ulcer Pain

Until recently the general opinion was held that ulcer pain was primarily caused by the presence of hydrochloric acid on the surface of the ulcer.

Present investigations[1,2] on the relationship of acidity and muscular activity to ulcer pain have led to the following concept of its etiologic factor:

"... abnormal motility[2] is the fundamental mechanism through which ulcer pain is produced. For the production and perception of ulcer pain there must be, one, a stimulus, HCl or others less well understood; two, an intact motor nerve supply to the stomach and duodenum; three, altered gastro-duodenal motility; and four, an intact sensory pathway to the cerebral cortex."

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DON BLAIR

Don Blair Is New O.S.M.A. Associate Executive Secretary

Don Blair has assumed his duties in the O.S.M.A. executive office as Associate Executive Secretary and Associate Business Manager of the *Journal*.

Named to succeed John Hart, whose resignation was reluctantly accepted by the Council, Mr. Blair has recently been discharged from the army where he served as a first lieutenant in the field artillery two years, including 14 months overseas. He graduated from Classen High School, Oklahoma City, and the University of Oklahoma. He was born in Enid and is 26 years old.

It is felt that Mr. Blair will ably fill the position left vacant by Mr. Hart, who, in the seven years he was with the Association, had done outstanding work.

Starr Brand Babies Honor Pioneer Drumright Doctor

With a "This Is Your Life" theme, approximately 1,500 "Starr Brand Babies" attended a picnic and all day celebration in Drumright Sunday, June 19, honoring O. W. Starr, M.D.

Lou Allard, Drumright publisher, was master of ceremonies. A number of civic organizations made various presentations to the pioneer physician. They included: a Drumright High School letter blanket from the School Board, 40 year service pin from the Red Cross which he helped organize, lifetime membership in the American Legion, a section of books in the library was donated in his honor, rope and lifetime membership from the Roundup Club, bridle from the Big Brothers club, and several other gifts were presented.

Born in Indian Territory, Doctor Starr attended the Cherokee Indian School at Claremore before going to medical school in St. Louis.

Leading a colorful career, Doctor Starr was asked to do an Indian stomp dance for the King and Queen of England during World War I. He served as a member of the state legislature from 1943 to 1947. A past President of the Creek County Medical Society, he has held several offices in community organizations and at one time has been president of every organization in Drumright of which he is a member. He was on the first advisory board of the Salvation Army. In 40 years, Doctor Starr delivered 3,230 babies.

Left to right, D. W. Humphreys, M.D., Cushing, Doctor Starr, and R. Q. Goodwin, M.D., Oklahoma City, O.S.M.A. President.

ANNOUNCEMENTS

Oklahoma City Clinical Society

October 24, 25, 26, 27, 1955. Biltmore Hotel, Oklahoma City.

A.M.A. Clinical Session

November 29-December 2, 1955. Boston.

Oklahoma Academy of General Practice

February 6-7, 1956, Tulsa Hotel, Tulsa, Oklahoma.

Oklahoma State Medical Association

May 6, 7, 8, 9, 1956. Municipal Auditorium, Oklahoma City.

Endocrine Society

Seventh annual postgraduate assembly, Indiana University School of Medicine, Indianapolis, September 26-Oct. 1, 1955. Information regarding the program is available from the Postgraduate Office, Indiana University School of Medicine, 1100 West Michigan, Indianapolis 7, Ind.

American Urological Association

Urology Award particulars available from the Executive Secretary, 1120 N. Charles St., Baltimore, Maryland. Annual meeting will be held May 28-31, 1956, Statler Hotel, Boston.

Association of Military Surgeons

62nd Annual meeting, Hotel Statler, Washington, D. C., November 7, 8 and 9, 1955. Further details available from the Association's office, Suite 718, New Medical Bldg., 1726 Eye St., N. W., Washington 6, D. C.

American Congress of Physical Medicine and Rehabilitation

33rd annual session, August 28-September 2, 1955, Hotel Statler, Detroit. Additional information can be had by writing the Congress at 30 N. Michigan Ave., Chicago 2, Ill.

American Board of Clinical Chemistry

Regional examinations will be held during October. Applications should be filed immediately by writing Oliver H. Gaebler, Ph.D., Henry Ford Hospital, Detroit 2, Mich.

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Deaths

LEE R. WILHITE, M.D.

1895-1955

Lee R. Wilhite, M.D., prominent Perkins physician who was also well known in military circles, died July 9 following a coronary.

Doctor Wilhite was born October 17, 1895 and graduated from the University of Oklahoma School of Medicine in 1916. A colonel, he served 36 months in World War I and 45 months in World War II. He held the Czechoslovakian Military Medal of Merit, the French Croix de Guerre, the U. S. Legion of Merit and the Bronze Star with oak leaf clusters. Several years ago he served as vice-president of the Oklahoma Academy of General Practice.

Survivors include the widow of the home and one daughter, Mrs. Leon C. Freed, whose husband, Doctor Freed, was in practice with Doctor Wilhite.

W. W. RUCKS, SR., M.D.

1874-1955

W. W. Rucks, Sr., M.D., Oklahoma City, one of the founders of Wesley Hospital, died July 14 after a short illness.

Born at Lebanon, Tenn., he received his medical degree from the University of Nashville. After graduation, he served four years as an assistant physician in the Central Tennessee hospital for the insane. He came to Oklahoma in 1901 and opened his practice at Guthrie. Later he was appointed head physician at Fort Supply. He served during World War I as a major and set up his practice in Oklahoma City after World War I. He was chief of staff at Wesley at the time of his death, having bought the hospital with four other physicians in 1919.

Survivors, in addition to his wife, include two sons, W. W. Rucks, Jr., M.D., Oklahoma City and Joseph D. Rucks, Oklahoma City. Two step-children, four grandchildren and a sister also survive.

Hospital Progress Shown In Building, Remodeling

Two cities in Oklahoma have new hospitals opened this summer while a third has added two new wings. New hospitals have been built in Frederick and Ardmore and extensive redecorating and remodeling has been done at Norman.

The $1½ million Southern Oklahoma Memorial Hospital recently opened in Ardmore is a 100 bed hospital with private and semi-private rooms and no open wards. Thornton Kell, M.D., is chief of the 18 doctor staff.

Built to be rapidly enlarged to 70 beds when needed, the Tillman County Memorial Hospital at Frederick now has 40 beds and features all the most modern hospital facilities. It was built at a cost of $600,000. Chief-of-staff is Roy L. Fisher, M.D.

The Norman Municipal Hospital building of two new wings has enlarged it from a 54 to 82 bed capacity. Three new operating rooms, two nurseries and two delivery rooms have been added and redecorating and remodeling of the old section were included in the $687,500 expansion of the hospital. Curtis Berry, M.D., is chief-of-staff.

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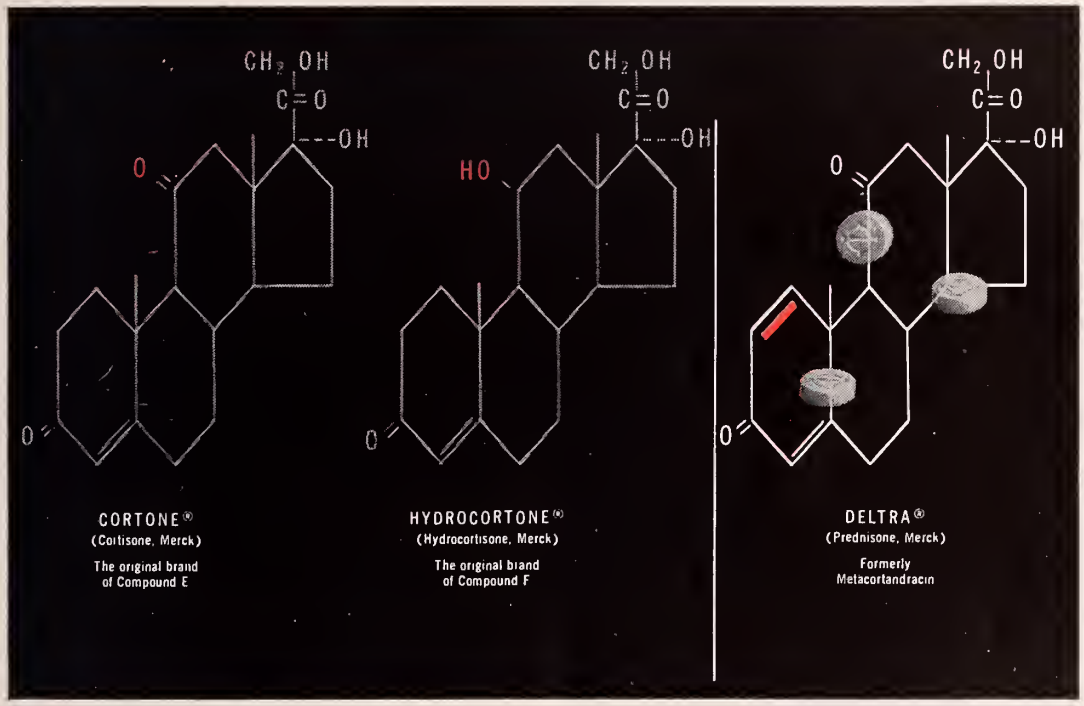

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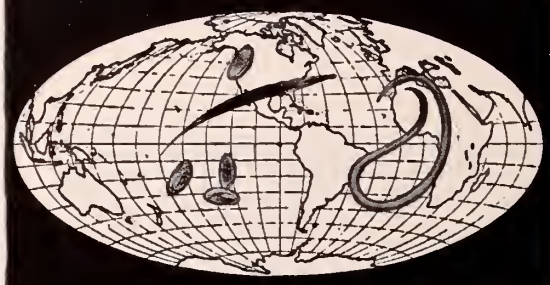

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MEDICAL TESTIMONY

(Continued from Page 271)

lawyer can make while preparing to present medical evidence is to educate himself in the anatomy, physiology, and pathology, as well as the scientific terminology, used by physicians in connection with the injury or disease under consideration. A trial lawyer is only half-armed when he goes into a case equipped with only the knowledge gained from a short, friendly conversation with the medical consultant.

I would strongly recommend to any lawyer who does personal injury litigation as a substantial part of his practice to have available in his office a standard medical dictionary, a standard work on anatomy, and when he has a particular subject coming up for trial he should beg, borrow or steal a standard textbook on it.

It is important to know something about medical terminology. When you are talking to your medical consultant and you refer to an anatomical structure by its correct scientific name there is no misunderstanding. Then, when you question the opposing medical witness using scientific terminology he is immediately aware that you know something about the subject and his answer is inclined to be a little less expansive in concept. The use of proper pronunciation has the same effect. Doctors should realize that when they are on the witness stand they are engaged in the business of selling ideas. The most successful witness is one who uses examples taken from common experience to illustrate the points he is presenting. Doctors must remember that if the jury does not understand what they are talking about, their efforts are going to be wasted.

Therefore, it seems to me that the objections which many doctors have to assuming the role of a medical witness can definitely be overcome if those suggestions are carried out. Thus, the doctor can get on the stand knowing what he is going to be up against and how to meet it. He will make a better witness and won't go away feeling he has been battered around and be mad because of the manner in which he was treated.

Quite frequently medical men object to testifying in cases involving insurance companies. Their attitude seems to be, "Why should I spend the time? It's an insurance company defending the case. They have the money, why shouldn't they pay it out?" Actually insurance companies pay nothing. They are not manufacturing money, they simply collect premiums. Consider automobile insurance. Everyone insures his automobile and your insurance rate is predicated upon the losses the company pays. When the losses are great, the rates go up. The insurance company merely collects and distributes the money; you pay the loss. In compensation cases, the same is true. The insurance company represents society in an over-all concept. It collects the money and pays it out.

Generally speaking, the doctor has been educated at the expense of society and has a legal obligation to step in and from his experience and knowledge to present the truth of ideas. You would not like to have your life, liberty or property at stake before a jury of unemployed who have nothing else to do but to sit upon a jury. You would want busy people sitting here. The same is true of doctors when called upon to make examinations of clients, the better equipped and the busier the doctor, the greater his duties and obligations.

Lynn Harrison, M.D., Wins First Place in O.S.M.A. Golf Tournament

Lynn H. Harrison, M.D., Oklahoma City, copped first place in the Oklahoma State Medical Association annual golf tournament sponsored by Pfizer Laboratories. Postponed because of rain during the Annual Meeting, the tournament was held June 15 at the Tulsa Country Club.

Second place golfer was J. M. Carey, M.D., also of Oklahoma City, and Willard L. McGraw, M.D., Tulsa, third. Approximately 125 golfers participated in the tournament. Simon Pollack, M.D., Tulsa, handled arrangements.

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

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Brown, H. W.: J. Pediat. 45:419, 1954.

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OFFICIAL PROCEEDINGS of the HOUSE OF DELEGATES of the OKLAHOMA STATE MEDICAL ASSOCIATION

Closing Session

The closing session of the 62nd Annual Session of the House of Delegates was called to order at 8:00 p.m., in the Ivory Room of the Mayo Hotel, Tulsa, Oklahoma, Sunday, May 8.

The Credentials Committee reported a quorum present.

The first order of business was a report from the Resolutions Committee. Doctor A. T. Baker of Durant, Chairman of the Committee made the following report:

Resolution

WHEREAS, today the House of Delegates of the Oklahoma State Medical Association in assembly this 8th day of May, 1955, is mindful of the absence, due to illness, of one of its faithful and long-standing members—the senior delegate to the American Medical Association, Dr. James Stevenson.

NOW THEREFORE BE IT RESOLVED, that the House express its unanimous and sincere wishes for Doctor Stevenson's rapid recovery and return to our midst, and

BE IT FURTHER RESOLVED that a copy of this Resolution be sent by telegram to Doctor Stevenson.

Doctor John Burton moved the adoption of this Resolution. Dr. R. Q. Goodwin seconded. The motion carried unanimously.

Doctor Baker next read the following Resolution:

Resolution

WHEREAS, the American Medical Association is the proper official organization representing medicine in the United States, and

WHEREAS, it is not only the privilige but also the obligation of this organization to protect and safeguard the quality of medical care to the patients and to assist in every way possible in the maintenance and further elevation of the present high standards of medical and surgical practice, and

WHEREAS, the American Medical Association is the only organization which can and should speak officially for ALL physicians without regard to their particular field of practice, and

WHEREAS, there is growing unrest due to the fact that the American Medical Association has not met its full obligations in respect to Accreditation of Hospitals, and

WHEREAS, Accreditation of Hospitals is recognized as being composed of two parts, namely, that having to do strictly with housekeeping problems and unquestionably concerns hospital management; and that having to do with the actual provision of medical care to the patients by the physicians and the training of young physicians and is the concern of the medical staff organization which should be guided by the American Medical Association, and

WHEREAS, failure of the American Medical Association to accept and discharge this obligation promptly will make more difficult the physicians' responsibility of providing the best medical service in the most economical fashion; now, therefore, be it

RESOLVED, that the American Medical Association be urged to assume promptly its true responsibility by establishing a plan for Accreditation of Hospitals, such plan to be limited to the problems of patient care, staff organization and intern and resident training program; be it further

RESOLVED, that the American Hospital Association be urged to cooperate with the American Medical Association by limiting is accreditation activities to the strictly physical problems of hospital care which unquestionably is its responsibility; be it further

RESOLVED, that the House of Delegates of the Oklahoma State Medical Association in regular annual session, assembled this 8th day of May, 1955, instruct its Delegates to the American Medical Association to introduce and support this or a similar resolution in the House of Delegates of the American Medical Association at its next regular session.

Doctor Baker moved the acceptance of this Resolution. Doctor Malcom Phelps seconded the motion. Motion carried.

Doctor Baker read the next Resolution:

Resolution

WHEREAS, the American Medical Association is the proper official organization representing medicine in the United States, and

WHEREAS, the American Medical Association is the only organization which can and should speak officially for ALL physicians without regard to their particular field of practice, and

WHEREAS, in the past, that is, since 1946, physicians in the State of Oklahoma coal producing areas have fully cooperated with the Medical Department of the Welfare and Retirement Fund of the United Mine Workers of America without question as to Specialty Board Certification or membership in the American College of Surgeons, and

WHEREAS, it is now proposed by the Medical Department of the Welfare and Retirement Fund of the United Mine Workers of America that all elective surgery must be sent to medical centers where American Board members of Specialties or Fellows of the American College of Surgery are available, and

WHEREAS, there has been no complaint of record by either the Medical Department of the Welfare and Retirement Fund of the United Mine Workers of America or patients receiving treatment from doctors now or having participated in this plan since its inception in 1946; and

WHEREAS, such proposal by the Medical Department of the Welfare Fund of the United Mine Workers of America in effect limits the free choice of physician by the participating members;

NOW THEREFORE BE IT RESOLVED, that the House of Delegates of the Oklahoma State Medical Association go on record as opposing such professional qualification requirements by the Medical Department of the Welfare and Retirement Fund of the United Mine Workers of America, and

BE IT FURTHER RESOLVED that the House of Delegates of the Oklahoma State Medical Association, in its regular session this 8th day of May, 1955, instruct its delegates to the American Medical Association to introduce and support this, or a similar Reso-

lution, in the House of Delegates of the American Medical Association at its next regular assembly.

Doctor Baker moved the adoption of this Resolution, Motion seconded and carried.

Doctor J. R. Colvert offered a substitution motion: "That we go on record as condemning the policy of denying the patient who is a member of this Welfare Fund the right to select his own physician, and being opposed to the Welfare Fund's setting the fee for medical or surgical service."

The substitute motion did not carry.

This concluded the report of the Resolutions Committee.

Next on the Agenda was the Report of the Committee on Constitution and Bylaws. Doctor E. H. Shuller, McAlester, read the following proposed amendments:

Amendment to By-Lows—A
Norcotics (1)

Amend Chapter I, Section 1, lines 17 and 18, page 38 by deleting on line 17 following the words, "membership when", the word, "such", and by deleting on line 18 before the words, "for a year", the following words and figures, "narcotics permit has been reissued", and inserting in lieu thereof the following words and figures, "eligibility for reissurance of such narcotics permit has been established".

Explonotion:

The purpose of this amendment is to eliminate the provision that a physician who has had his membership revoked because of narcotics violations be required to secure a narcotics permit to reestablish eligibility for membership since there are, no doubt, situations in which such physicians might become eligible for issuance of a narcotics permit but might prefer to forego securing such permit.

Doctor Shuller moved the adoption of this Amendment. Motion seconded and carried.

Amendment to By-Lows—B
Associote Memberships

Amend Chapter I, Section 3, sub-section (e), line 16, page 39 by deleting the period following the words, "of the petition", inserting in lieu thereof the following words and figures, ", provided that associate membership shall be automatically terminated when an Associate Member removes his residence from the State of Oklahoma".

Explonotion:

The purpose of this amendment is to clear the membership rolls of the Association of the names of Associate Members who have moved from the State, eliminating any real reason for their enjoying the privileges of Associate Membership.

Doctor Shuller moved adoption of this Amendment. Motion seconded and carried.

Amendment to By Lows—D
Apportionment of Delegotes (1)

Amend Chapter III, Section 1, lines 8, 9, 10, and 11, page 40 by deleting after the words, "Annual Meeting", on line 8 the remaining words and figures in line 8 and all of lines 9 and 10 and that portion of line 11 appearing before the words, "each county"; and inserting in lieu thereof following the words, "Annual Meeting", on line 8 a (period) and on line 11 capitalizing the letter e in the word, "each".

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Explanation:

The purpose of this amendment is to eliminate the requirement that the list of delegates and alternates be published in the **Journal** of the month previous to the Annual Meeting, since it has seldom, if ever, been possible to compile an accurate list of delegates and alternates for such publication. This is particularly true in view of the fact that the printer's deadline on the **Journal** is one month earlier than its date of publication.

Doctor Shuller moved the adoption of this Amendment. Motion seconded and carried.

Amendment to By-Laws—E
Apportionment of Delegates (2)

Amend Chapter III, Section 1, lines 15 and 16, page 40 by deleting after the words, "paid membership", on line 15 and before the words, "the next", on line 16, the following words and figures, "within thirty (30) days of", and inserting in lieu thereof the following words and figures, "as shown by the membership records of the Executive Office on the date thirty (30) days prior to".

Explanation:

The purpose of this amendment is to establish a deadline for receipt of membership dues to be used as a basis of computing representation in the House of Delegates. The language of the By-Laws in that respect is now so ambiguous as to being particularly difficult to apply.

Doctor Shuller moved the adoption of this Amendment. Motion seconded and carried.

Amendment to By-Laws—F
Amalgamations (1)

Amend Chapter XI, Section 1, sub-section (b), line 14, page 46, following the words, "Council at", by deleting the remaining words on line 14 and the following words on line 15, "at least ninety (90) days", and inserting in lieu thereof the following words and figures, "a meeting of the Council".

Explanation:

The purpose of this amendment is to eliminate the requirement that petitions for amalgamation be presented ninety days before the Annual Meeting since this provision has appeared to work a hardship upon the Counties of the State which from time to time have desired to amalgamate and has in some cases resulted in more than a year's delay in effecting such amalgamations.

Doctor Shuller moved the adoption of this amendment. Doctor Cotton seconded. Motion carried.

Amendment to By-Laws—G
Amalgamations (2)

Amend Chapter XI, Section 1, sub-section (b), lines 16, 17, 18, and 19 by deleting on line 16 following the words, "The Council", the remainder of line 16 and all of lines 17 and 18 and that portion of line 19 which appears before the words and figures, "When such", and inserting in lieu thereof the following words and figures, "after receipt of such requests for amalgamation, shall consider such requests and make its recommendations to the House of Delegates".

Explanation:

The purpose of this amendment is to eliminate the requirement for publication of requests for amalgamation resulting in a simplification of the procedure.

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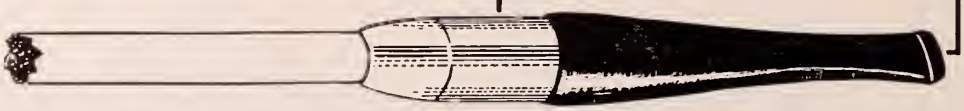

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Doctor Shuller moved the adoption of this Amendment. Doctor Cotton seconded. Motion carried.

Amendments to By-Laws—H
Delegates and Alternates

Amend Chapter XI, Section 6, page 47, by deleting the entire Section 6 and inserting in lieu thereof the following words and figures,

"Section 6 Delegates and Alternates

(a) Selection of Delegates and Alternates

Each component society shall, at an appropriate time prior to the Annual Session of this Association, select the number of delegates and alternates to which it is entitled under the provisions of Chapter III, Section 1, of these By-Laws.

(b) Certification of Delegates

The secretary of each component society shall submit to the Executive Office, not later than thirty (30) days prior to the Annual Session of this Association, a report containing the names of each delegate and alternate as selected by the component society.

(c) Issuance of Credentials

Not later than fifteen (15) days prior to the Annual Session, the Executive Secretary shall issue appropriate credentials to the delegates and alternates as reported by the secretaries of the component societies and determined by the records of the Executive Office to be members in good standing of this Association and eligible to serve as delegates or alternates."

Explanation:

The purpose of this amendment is fourfold: (1) to allow the County Societies to select their delegates and alternates by the method of choice, (2) to establish a deadline for the reporting of the names of delegates and alternates, (3) to eliminate the confusion which has existed in the past in regard to substituting of alternates for delegates, and (4) to establish a deadline for the issuance of credentials to the delegates and alternates.

Doctor Shuller stated that the Committee recommended the adoption of the last proposed amendment with the deletion of the following:

Under Section (b) Certification of Delegates, in the fourth line place a period after "component society" and delete "and such report shall clearly designate a specific alternate for each delegate and no person other than the alternate so specified shall be eligible to serve for such delegate."

Doctor Shuller moved the adoption of this Amendment with the deletion. Motion seconded.

Doctor W. W. Cotton moved: "That we accept the Amendment to Article B as originally written". The motion was not seconded.

The original motion as recommended by the Committee was voted upon and carried.

The next order of business was the election of Officers. Doctor Gallaher asked the Vice-Speaker, Keiller Haynie, M.D., to take the chair and conduct the election.

Doctor Haynie announced that as all the officers had been nominated without opposition, it would be in order to vote upon the entire slate at one time. He read the slate, as follows:

President Elect—H. M. McClure, M.D., Chickasha.

Delegate to the A.M.A.—John F. Burton, M.D., Oklahoma City.

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Alternate Delegate to the A.M.A.—Malcom Phelps, M.D., El Reno.

Vice President—George Ross, M.D., Enid.

Secretary-Treasurer—W. W. Rucks, Jr., M.D., Oklahoma City.

Dr. W. W. Fox, Norman, moved that we accept the slate as submitted. Doctor Joe Duer seconded. The motion carried.

Doctor Haynie next read the slate of Councilors and Vice-Councilors as follows:

District No. 3—C. M. Hodgson, M.D., Kingfisher for Councilor; Henry Russell, M.D., Enid, Vice-Councilor.

District No. 4—C. A. Traverse, M.D., Alva, Vice-Councilor

District No. 6—Elmer Ridgeway, M.D., Oklahoma City, Councilor; Peter Russo, M.D., Oklahoma City, Vice-Councilor.

District No. 9—Francis R. First, M.D., Checotah, Councilor; I. W. Bollinger, M.D., Henryetta, Vice-Councilor.

District No. 12—Wm. T. Gill, M.D., Ada, Councilor; M. E. Robberson, M.D., Wynnewood, Vice-Councilor.

District No. 12—Charles Green, M.D., Lawton, Vice-Councilor.

Doctor J. R. Colvert, Oklahoma City, moved that the Councilors and Vice-Councilors be elected as nominated. Motion seconded and carried.

Doctor Haynie asked all the new officers to come to the front and be introduced.

As this concluded the business of the session, the meeting was adjourned.

—Reported by: Mary O'Leary.

Have You Heard?

DOCTORS JOHN W. and JAMES D. MARTIN, Cushing, have moved into a new clinic in that city, equipped with four treatment rooms, minor surgery and recovery room, reception room, private offices for each physician, laboratory, rest rooms and utility room.

LOREN MILLER, M.D., Tulsa, was one of the guest speakers at the southern district meeting of the American Association for Health, Physical Education and Recreation.

THORNTON KELL, M. D, J. HOBSON VEAZEY, M.D. and LOYD L. LONG, JR., M.D. have opened the Medical Arts Clinic at 921 14th St., N.W., Ardmore.

R. H. MOORMAN, JR., M.D., a graduate of the University of Oklahoma School of Medicine, has joined the staff of the Enid State School as resident physician. He will also be associated with MARK HOLCOMB, M.D., in private practice.

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Book Review

THE DIABETICS COOK BOOK. Mrs. Clarice B. Strachan. The Medical Arts Publishing Foundation, 1603 Oakdale St., Houston 4, Texas. 1955. Price $6.50.

The Diabetic's Cookbook is being published this month. This unique book brings to the diabetic more than 250 recipes for foods and beverages that he can eat and enjoy. Each recipe is written and arranged so that it can be fitted quickly into the individual diabetic's diet prescription. Indeed, The Diabetic's Cookbook is such a practical cookbook for diabetics that Dr. Charles H. Best, one of the discoverers of insulin, has written the introduction. In it he says, "I have no hesitation in recommending this book most highly and I feel sure that a very large number of diabetics—and their families—will welcome its publication and will profit by reading it."

Copies may be obtained from your bookstore or by writing directly to the publisher.

Tulsa Ob-Gyn Society Organized

Announcement has been made of the organization of the Tulsa Obstetrical and Gynecological Society. The Society will meet five times yearly with presentations of papers by local members and guest speakers.

Officers are: D. N. Burns, M.D., President; W. B. Sanger, M.D., President-Elect; W. C. Lindstorm, M.D., Vice-President; J. E. Goldberg, M.D., Secretary-Treasurer; and W. F. Thomas, Jr., M.D., member of the Executive Committee.

Members, in addition to the officers, include the following physicians: Paul A. Bischoff, Eugene S. Cohen, Robert E. Dillman, Wm. N. Henderson, E. O. Johnson, Hall Ketchum, D. M. McDonald, Wm. R. Loney, Wm. R. McShane, Houston F. Mount, Matthew B. Moore, F. D. Sinclair, E. R. Shapard, E. Malcolm Stokes, A. N. Vammen, and B. R. Westbrook.

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Town Pays Tribute To Doctor Taylor

Paying tribute to R. Z. Taylor, M.D., Blair, on his 71st birthday, the citizens of that town and the surrounding area held an all day celebration June 24. Former residents and friends from as far away as California and Tennessee attended the celebration.

Dr. E. E. Dale of the University of Oklahoma history department was principal speaker at the occasion. Doctor Dale was a former superintendent of Blair schools. Author and co-author of 18 books, it was during the time he was at Blair that he published his first book, Territorial Acquisitions of the United States.

Doctor Taylor, who has been practicing in Blair since 1909, was born at Trenton, Tenn., on June 24, 1884. He studied medicine at Vanderbilt University and interned at Terre Haute, Ind. He is now semi-retired although he still maintains an office in Blair. He estimates that he had delivered 5,000 babies during his 46 years in Blair.

Editorials

Oklahoma City Clinical Society

The Oklahoma City Clinical Society, which had its beginning in 1930, will open its 25th annual four day Conference on October 24, 1955.

A large attendance is expected at this very popular meeting held in centrally located and easily accessible Oklahoma City. It is interesting to note that at the present time Oklahoma City is rated third in the nation as a convention city.

As in former years, an outstanding program of postgraduate teaching has been arranged. This includes lectures and discussion by 16 distinguished guest speakers selected from various medical and teaching centers throughout the nation, as well as many Oklahoma City teachers and physicians. Dr. Elmer Hess, of Erie, Pennsylvania, president of the American Medical Association, will give an address at the banquet meeting, October 24th. In addition to the general assemblies and panel discussions there will be daily luncheon round table question and answer sessions, and a clinical pathologic conference. The entertainment will include dinner meetings, the annual Clinic Dinner Dance and the Stag Smoker.

A cordial invitation is extended to all physicians who are members of their County Societies to attend this meeting from October 24 through October 27 at the Biltmore Hotel.

Nurses Loan Fund

The Woman's Auxiliary of the Oklahoma State Medical Association is making an effort to recruit outstanding highschool girls to study nursing. Since students of nursing are no longer slaves but are students, their education to be nurses costs more than many of them have. To help these girls the Auxiliary has established a student loan fund. Such a good job of recruiting has been done that the loan fund of $4,000.00 is exhausted. They are appealing to the doctors to help build it up, asking for contributions of $10.00 or more. Let's not just "let Joe do it" —let's everybody do it.

Polio Vaccination

Every conceivable effort has been made by the N.I.H. (National Institute of Health) and the L.B.C. (Laboratory of Biologics Control) and many hard working advisors to insure the safety of poliomyelitis vaccine. Most of the difficulty appears to stem from two sources (1) haste and pressure from the N.F.I.P. (National Foundation for Infantile Paralysis) (2) lack of complete understanding of the behavior of the virus under conditions of manufacture on a large scale.

The haste of the N.F.I.P. is apparent from the order for 27 million cc. of vaccine in August, 1954, in anticipation of a favorable Francis report. "This was done to encourage the manufacturers to stay in production after the field trials."[1] This haste appears to have influenced the licensing procedure. "A detailed record of events in manufacture and testing (a protocol) has been successfully used for many years for many products to evaluate compliance by the producer with regulations and standards. Many biologic products are released directly by the manufacturer, some are required to await protocol review by the L.B.C. and others are routinely tested by the L.B.C. before release. *The procedure of release on protocol review would not ordinarily be applied to a new product, but the situation with respect to poliomyelitis was unique. A great deal of experience had been accumulated in a short time.*"[1] Not all the vaccine was released on protocol alone—about half had been tested by the L.B.C.

The unpredictable behavior of the virus is apparent from the Surgeon General's report. In some instances a positive culture was obtained from pooled vaccine when cultures of vaccine of individual strains before pooling were negative. In other instances when the same lot of vaccine was tested by more than one laboratory the results were not the same. Some got positive cultures and others got no growth.

On May 26, 1955, only 29 days after the Cutter vaccine had been recalled an amend-

ment to the minimum requirements for testing was issued:

Tabular Summary of Amendments to Minimum Requirements for Poliomyelitis Vaccine

Original	Revised
Single Strain Pool	
1. Test 1 milliliter per liter of material.	1. Test minimum of 500 cc's per pool.
2. Must have 1 negative test.	2. Must have 2 consecutive negative tests.
3. No restriction on reheating.	3. Can reheat only once; if this is done, it must be followed by two successive negative tests 3 days apart.
Trivalent Pool	
1. Test 1 milliliter of material.	1. Test minimum of 1,500 cc's of material.
2. No specific restriction on number of times material can be reheated, although conventionally not done more than once.	2. Cannot be reheated.
3. Must have 1 negative test.	3. Must have 1 negative test.
Final Container	
1. Not tested for live virus.	1. Test random samples of filled bottles to determine if there has been accidental contamination by polio virus.

Criteria for Release of Vaccine Already Produced

Lots Produced but not Yet Released	*Lots Already Released, Now Being Recleared*
Vaccine in this category is being re-tested in larger volume to approximate as nearly as possible the tests for new material according to criteria established by Technical Committee on Poliomyelitis Vaccine.	Vaccine in this category is recleared if epidemiological evidence demonstrates that it can be used with safety or if retested.

This rate of progression is quite rapid but is in keeping with the whole program. Since the trivalent pool cannot be reheated, the manufacturers must do everything possible to insure inactivation prior to that point. Whatever is done must not deprive the vaccine of its potency. It seems obvious that a good deal more time will be required before we can be assured of both safety and potency. At least three of the 14 lots used in the field trials were of pool antigenic quality. Two of these three were used in Oklahoma and we are faced with the realization that Oklahoma's Polio Pioneers were not demonstrably protected.

This points up the difference in the philosophy of the physician in practice and the physician or organization interested in the over all picture of disease prevention. The over all picture of a decline in the rate of poliomyelitis may warm the heart of the public health man, but the practicing physician and the parent cannot be happy unless he knows with certainty that the method of reducing the over all morbidity is harmless to his particular patient and his particular child.

The great haste to protect children seems most altruistic but in reality is a reflection of our basic American materialism—let us get on with it for tomorrow we may die and that would be the end of everything.

The development and application of tetanus toxoid, of diphtheria toxoid, of whooping cough vaccine was not accelerated by a heave by a lay organization and by reams of newspaper publicity. Today most all children are immunized against these diseases in a safe and sane manner. Morbidity and death rates from these diseases have steadily declined. Today the doctor in practice sees them rarely. The American biologic manufacturers have been most reliable in developing and improving biologicals and in the utilization of knowledge acquired by research people everywhere. They have been most generous in grants for further research, letting the chips fall where they will. When the N.F.I.P. ordered 27 million cc. of vaccine at the end of the field trials, it grabbed the ball and ran away with it. Maybe we have learned a lesson.

1. Public Health Service Technical Report on Salk Poliomyelitis Vaccine. June, 1955.

Scientific Article

5-Androsten-3 beta, 16 beta-Diol, A STEROIDAL *Hypotensive and Bradycardic* AGENT

COYNE H. CAMPBELL, M.D. and MAX N. HUFFMAN, Ph.D.

The C_{19} steroid, 5-androsten-3β,16β-diol, was synthesized in the Section of Organic Chemistry of the Oklahoma Medical Research Foundation in 1953.[1] The compound was found by Doctor Elva Shipley of the Endocrine Laboratories, Madison, Wisconsin, to possess no androgenic and doubtful myotrophic action in the young, castrate male rat. Bioassays performed by Professor Allan Stanley at the University of Oklahoma School of Medicine, using young, intact male rats, indicated that 5-androsten-3β, 16β-diol had no myotrophic action and that the diol, furthermore, produced no weight changes in the adrenal and the thymus glands. When this steroid showed unusual properties in the fish anesthesia test[2] (using the *Gambusia affinis*), it was decided to submit it to a brief clinical trial in psychiatric disease. In the the meantime other screening programs had shown the compound to possess a bradycardic and hypotensive effect in the normal, nembutal-anesthetized dog. These latter findings were of special interest to us, in line with our theory that steroids may selectively anesthetize certain sub-cortical areas of the brain.[3] We, therefore, elected first to determine whether androsten-3β,16β-diol had actual hypotensive and bradycardic effects in the human.

The steriod was first cautiously administered to senile—or near senile—arteriosclerotic patients at the Coyne Campbell Sanitarium, these patients having been under custodial care for periods of time ranging from one month to several years. It was felt that such patients would be minimally subject to suggestive influences and would, furthermore, show no further blood pressure lowerings due to hospitalization alone. The androstenediol was dissolved in an emulsifying oil, 2.5 mg. per ml., and administered by mouth, freshly emulsified in water, milk or fruit juice immediately before taking. The dose was 10 mg. per day at first, with gradual increases to 50 mg. per day in some patients. The diastolic blood pressures of these patients are shown in Graph A. Over the period of treatment, extending from 8 to 24 days, the pressures fell 4 millimeters in one patient (B. S.), 16 in another (L. F.), and 20 millimeters in the remaining two patients (L.M. and E. M.). It is to be observed that the patient whose diastolic blood pressure fell only four points had a reading of only 68 at the commencement of the experiment.

On the basis of the foregoing results it was decided to submit 5-androsten-3β,16β-diol to a placebo-controlled experiment to establish reality of effect. For this purpose six subjects at the Sanitarium were chosen. These subjects were ambulatory employees of the Sanitarium, with the exception of one (A. C. A.), who was a well-adjusted custodial patient. All subjects, when receiving the steroid, received 20 mg. t.i.d., in a total daily volume of 24 ml. of oil; when receiving placebo, all patients received 8 ml. of the same emulsifying oil three times daily. Each subject was given the prescription from a bottle marked with the code number 352B. The six subjects on the placebo-controlled ex-

THE AUTHORS

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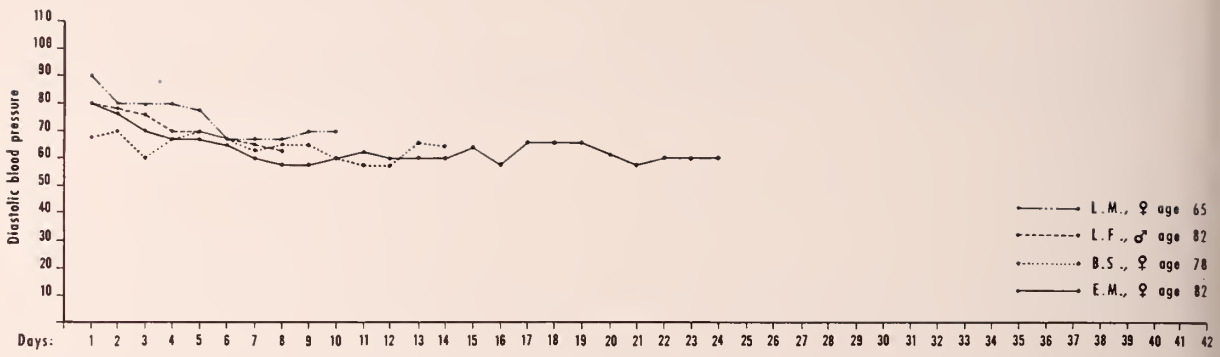


Graph A

periment, however, were divided into two groups in relation to the order in which they were given placebo. One group (Graph 1, Graph 2, Graph 3) was given steriod for approximately 14 days, then placebo for about 14 days, and then steroid for a final period. The other group (Graph 4, Graph 5, Graph 6) received placebo at both ends of the experiment and steroid at the middle period*. Usually blood pressures and pulse readings were taken three times per day, uniformly at 9 a.m., 1 p.m., and 5 p.m., except in the case of subject S. W. (Graph 1), with whom it was not convenient to do pulse readings. Graphs 1, 2, 3, 4, 5, and 6 record the diastolic blood pressure and the heart beat rate for the 1 p.m. measurements only. The data from which these Graphs were constructed are presented in Table I and Table II (1 p.m. measurements only).

Only two of the six subjects on the placebo-controlled experiment had any degree of hypertension (M. W., Graph 2; H. O., Graph 5). In these, the steroid lowered the diastolic pressure approximately 32 points in one (M. W.) and 17 in the other (H. O.). In the other subjects with normal blood pressures, the diastolic lowering amounted to approximately 15 points in S. W. (Graph 1), 15 points in A. C. A. (Graph 3), and 14 points in F. S. (Graph 4). In the sixth subject with normal blood pressure (E. D., Graph 6), the diastolic blood pressure fell roughly 8 millimeters, although the pressure did not rise again during the nine day period on placebo**. In this subject, nevertheless, the pulse recordings show the expected cyclical changes.

*This design was suggested by Dr. D. M. Green, Lasdon Foundation, Inc., Yonkers, New York.

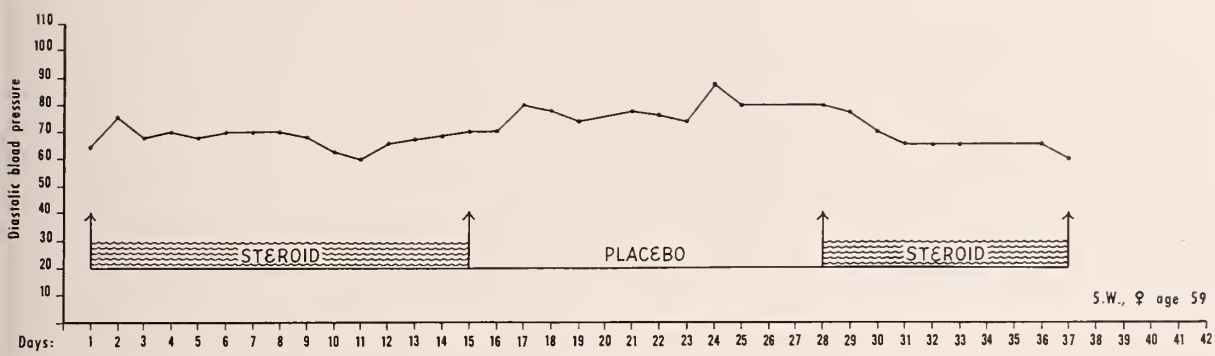
**The differences in blood pressure were calculated from the averages of the last five days of the two adjacent periods showing the greatest change.

PRESCRIPTION	DAY	S.W., FEMALE, AGE 59 (Graph 1) b.p.	p.r.	M.W., FEMALE, AGE 57 (Graph 2) b.p.	p.r.	A.C.A., MALE, AGE 80 (Graph 3) b.p.	p.r.
STEROID, 20 mg. t.i.d.	1	108/64		170/100	90	140/84	84
	2	120/76		166/96	88	128/76	76
	3	100/68		158/90	88	126/72	68
	4	116/70		148/86	86	128/74	70
	5	110/68		------	--	125/68	64
	6	110/70		148/90	90	130/65	62
	7	120/70		146/86	88	128/70	70
	8	120/70		146/84	86	124/65	--
	9	116/68		140/78	80	------	--
	10	116/62		150/84	82	128/66	--
	11	112/60		------	--	128/64	--
	12	110/66		148/85	78	122/66	--
	13	120/68		138/86	74	126/64	--
	14	120/69		146/84	72	128/67	--
PLACEBO	15	112/70		140/78	70	128/68	--
	16	110/70		150/80	78	128/66	76
	17	120/80		150/86	80	130/70	78
	18	120/78		149/86	86	134/74	84
	19	120/74		------	--	130/72	74
	20	------		158/90	88	126/70	78
	21	124/78		168/102	96	128/76	68
	22	126/76		160/98	90	130/78	78
	23	124/74		168/98	89	126/76	70
	24	128/88		170/100	95	130/78	76
	25	130/80		170/100	96	130/76	84
	26	------		170/108	96	136/80	84
	27	------		168/100	94	138/82	82
STEROID, 20 mg. t.i.d.	28	130/80		160/96	80	------	--
	29	124/78		------	--	134/82	--
	30	112/70		166/99	84	128/76	80
	31	108/66		146/89	78	130/76	80
	32	110/66		143/80	76	136/80	86
	33	104/66		140/80	74	128/74	78
	34	------		140/80	68	126/70	70
	35	------		136/70	70	126/70	66
	36	110/66		130/70	68	128/68	64
	37	104/60		136/68	69	126/74	70
	38			132/71	66	124/68	66
	39			130/68	68	128/66	66
	40			130/68	66	126/60	60
	41					128/64	68
	42					128/68	66

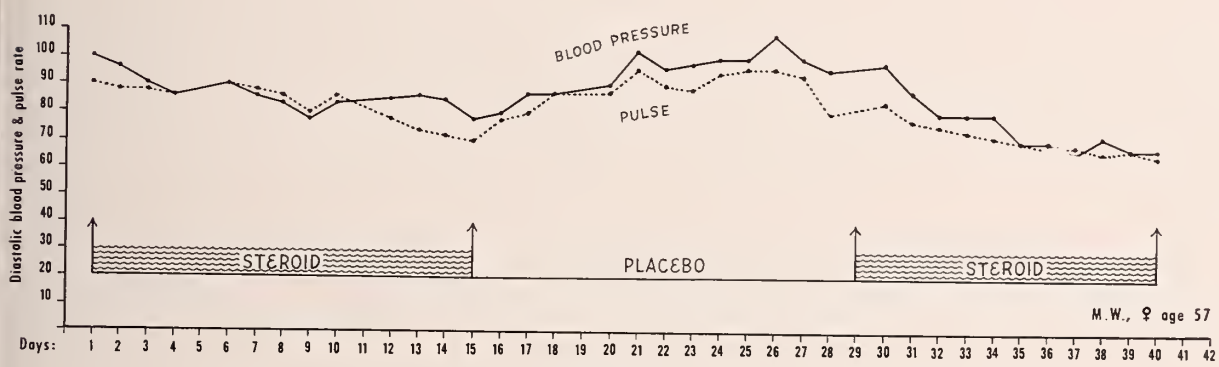
Table I

PRESCRIPTION	DAY	F.S., MALE, AGE 38 (Graph 4) b.p.	p.r.	H.O., MALE, AGE 44 (Graph 5) b.p.	p.r.	E.D., FEMALE, AGE 56 (Graph 6) b.p.	p.r.
PLACEBO	1	136/76	78	176/110	98	106/66	60
	2	133/76	74	170/106	94	110/70	66
	3	136/80	86	178/104	88	136/80	78
	4	126/77	80	-------	--	120/75	76
	5	126/78	80	170/100	87	128/68	70
	6	132/80	78	160/100	90	122/73	68
	7	------	--	158/94	86	122/82	70
	8	140/76	72	176/100	89	133/80	78
	9	140/86	80	180/110	98	123/80	80
	10	------	--	178/110	94	130/86	76
	11	130/80	76	170/100	88	120/72	74
STEROID, 20 mg. t.i.d.	12	140/80	70	-------	--	118/68	66
	13	126/68	66	170/100	94	110/70	60
	14	------	--	170/100	90	118/68	66
	15	126/70	66	172/100	90	------	--
	16	126/77	68	160/90	86	124/80	68
	17	124/78	60	160/100	84	112/68	66
	18	126/68	64	168/96	86	112/78	68
	19	118/68	65	------	--	110/70	62
	20	115/65	64	170/100	84	110/70	64
	21	------	--	166/96	78	112/70	60
	22	116/68	64	160/94	74	------	--
	23	114/65	66	150/96	74	116/78	60
	24	114/65	66	154/90	70	110/68	62
	25	112/60	60	160/90	74	110/70	66
PLACEBO	26	118/68	69	170/88	76	110/70	60
	27	128/72	70	150/82	70	124/64	68
	28	------	--	160/80	68	------	--
	29	136/76	84	160/82	76	------	--
	30	138/80	86	170/96	78	128/78	68
	31	138/82	83	168/98	80	126/70	70
	32	130/78	80	174/100	88	118/66	66
	33	138/80	79	172/104	86	124/76	74
	34			179/100	80		
	35			180/100	88		
	36			178/101	88		
	37			176/108	90		
	38			179/108	90		

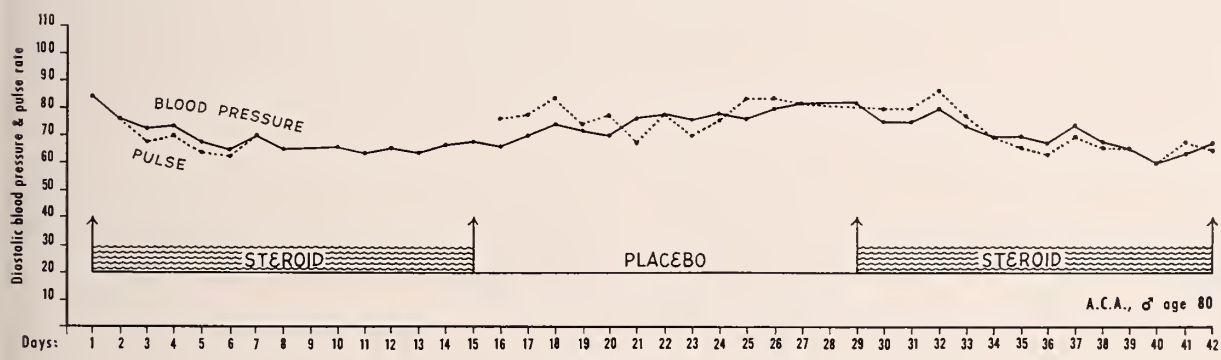
Table II



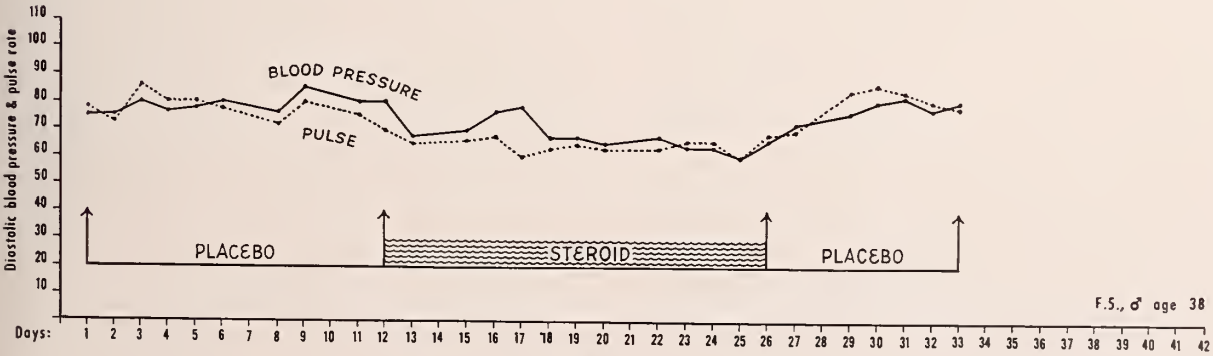
Graph 1



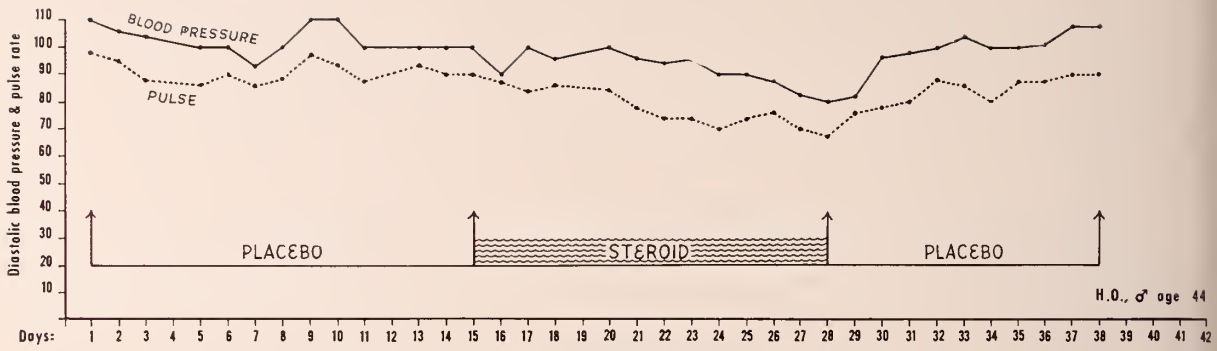
Graph 2



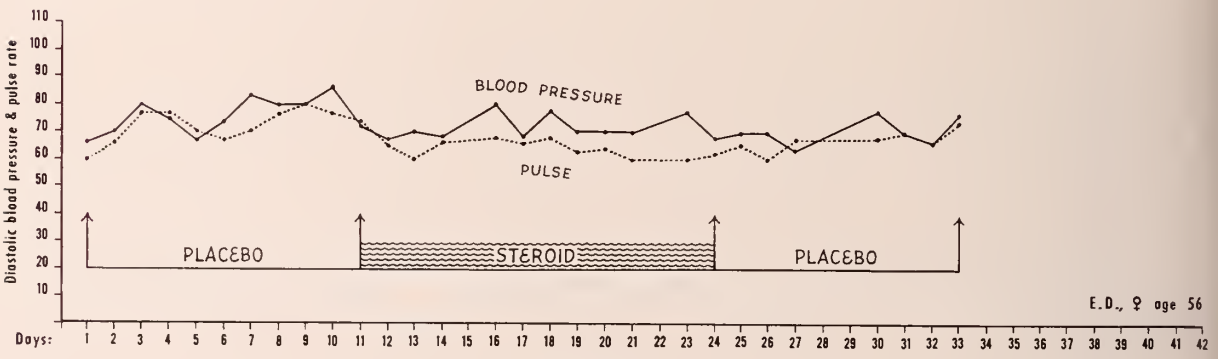
Graph 3



Graph 4



Graph 5



Graph 6

In general the bradycardic effects in these subjects closely paralleled the hypotensive effects.

Discussion

There can be no doubt, from a careful consideration of the data hereinbefore set forth, that the C_{19} steroid, 5-androsten-3β,16β-diol, brings about a lowering of the blood pressure and a slowing of the heart in the human subject. As to the exact position of this new agent in clinical hypertension, we, of course, cannot say. It is not our intention to pursue an evaluation of this material in the various categories of clinical hypertension, preferring to leave this important task to the specialists in the field. We are publishing our data in the hope of stimulating a full investigation of this steroid in hypertension.

It is our belief that 5-androsten-3β,16β-diol has a pharmacologic action similar to that of *Rauwolfia* alkaloid. If this be substantiated, it will be powerfully confirmatory to our theory that certain steroids, in therapeutic dosage, selectively anesthetize or sedate sub-cortical areas of the brain.

It is also our opinion that this steroid will be of value in certain psychiatric conditions accompanied by disturbances in the regulatory mechanisms of blood pressure.

Summary

The steroid 5-androsten-3β,16β-diol causes a lowering of the diastolic blood pressure and a slowing of the heart beat rate in the human subject.

Acknowledgments

The authors wish to express their grateful appreciation for financial support of this research by the Lasdon Foundation, Inc., Yonkers, New York.

Addendum

Since this work was completed we have commenced research with another steroid, 5-androsten-3β-16α-diol, and we have been amazed at its powerful, rapid hypotensive action. We have also observed that concomittant with the lowering of blood pressure there is an alleviation of nervous symptoms. This steroid is being tested under code number 662B.

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Mycetoma in the United States:

Review with Report of A CASE *From* NEW AREA

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In mycetoma (Madura foot) the chronic granulomatous lesion of an affected part is the result of some fungal infection. This condition typically involves a foot or a leg of an habitually barefoot man engaged in agricultural work.[1, 2] Initially, the lesion is a hard, deep-seated, fixed nodule. It gradually swells and, typically, other nodules develop from it. These become softened and rupture. Draining sinuses develop as the overlying skin undergoes necrosis. The degree of the swelling corresponds to the progress of the infection. The bone is involved in advanced cases. Joints are usually spared even though surrounding bone is attacked. Fascia is particularly resistant to breakdown.[3] Unless secondary infection occurs, there is little systemic reaction and little discomfort.

In his dispensary in Madras, India, Gill observed the condition and gave the first modern description of it in 1842. Colebrook, working in the same dispensary, contributed further observation on "Madura foot." Van Dyke Carter devised the term "mycetoma" as a result of his experience with the disease from 1860 to 1874.[4] The original attempt at classification according to the color of the "granules" was abandoned in favor of the identification of the fungus. The fungi usually exist as saprophytes in the soil or on plants and are thought to gain entrance by trauma, however minimal. About one half are shown to be aerobic actinomyces (nocardia).[1]

Mycetoma is found usually in tropical or subtropical zones where few people wear shoes and their feet come into direct contact with the soil. Cases have been reported from each continent except Australia. Beginning with Kemper and Jameson's first case of mycetoma in the United States reported in 1876, there were 61 reported through October, 1950. Of these 35 were from southern states.[2, 4, 5, 6, 7, 8] Eighteen were from Texas, four each from Georgia and Louisiana, eight from California, two or three from each of nine states and one each from eight states (fig. 1). Canada, Alaska, and Mexico have been given as other North American sources.[4] In a series of 100 cases from the Orient, 92 were men, 91 were farmers, seven were farmers' wives.[1]

The diagnosis of "Madura foot" should be kept in mind when a local, chronic, granulomatous lesion of the foot appears, especially if in a man who is or has been engaged in agricultural or outdoor work. The lesion may be nodular, vesicular, pustular or ulcerative. The patient is in good general condition. He complains surprisingly little of discomfort and usually presents himself late in the course of the disease. Sinus tracts are usually present. Laboratory findings may show mild secondary anemia. Culture of drainage or specimen for biopsy should establish the diagnosis. Study of roentgenograms will show marked osseous degeneration of the infectious and osteoporotic type.

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FIG. I CASES OF MYCETOMA REPORTED

Case Report

On October 30, 1950, an adult Negro male, aged 66 years, was admitted for swelling and pain of some 14 months' duration in the left ankle. Born in South Carolina, he later lived in Georgia and Missouri before coming to Oklahoma in 1916. He lived on a farm the first 25 years but not thereafter. About 34 years before admission, the patient sprained his left ankle. There were no residuals. Again, seven or eight years before admission, he sustained a severe sprain of the left ankle. It remained swollen and was intermittently painful. In September, 1949, the pain became constant and the swelling of the left ankle increased.

Examination showed blood pressure of 186/84 and a well healed right abdominal scar. Otherwise, the abnormal findings were limited to the left leg. The left thigh and calf were one inch smaller than those on the right. The left ankle was three and one half inches greater in circumference than the right. It was ankylosed except for 5 or 10 degrees dorsiflexion. There was marked swelling of soft tissue about the left ankle, but no heat, redness, or tenderness. There were no draining sinuses. Roentgenogram of the chest was reported as normal at this time. Studies of the left ankle taken on October 31, 1950 showed swelling of the soft tissues, especially about the medial malleolus of this ankle region. Bones of the ankle region, especially the distal portion of the tibia, showed some decalcification. There was some periosteal thickening and calcification along the medial malleolus. The tip of this malleolus showed some erosion and demineralization. The joint space at the ankle was of normal width and the articular surfaces appeared smooth. The three entities suggested were periosteal sarcoma, synovial neoplasm, and a luetic involvement of the joint and bone. The ankle was re-studied on January 22, 1951 and findings were essentially the same.

Laboratory Examinations: Sedimentation rate was 34 in one hour; hematocrit 41; RBC 4,909,000; hemoglobin 12.5 gm.; WBC 6,500; urinalysis negative; Kahn 3+; Kolmer 4+. Spinal fluid cell count, globulin, total protein complement fixation and gold curve were negative. Repeat blood counts were similar. Smears and culture of sputum for tubercle bacilli were negative.

On November 13, 1950, specimens from the synovia of the medial aspect of the left ankle and from the thickened subcutaneous tissue were taken for biopsy. Study was done on the five small irregular fragments of tissue, one of these had a fairly typical appearance of an actinomycotic granule. This was the only such structure found. There was question as to whether or not this was the etiologic agent. Diagnosis at this time was "chronic inflammatory reaction of undetermined specificity; actinomycosis must be considered."

The patient was given penicillin, streptomycin and aureomycin without alleviation of the complaints. Amputation did not seem indicated at that time. When the veteran was re-examined in April 12, 1951, and in August, 1951, the clinical picture of the left ankle had not changed, except that he had difficulty in walking on stairs and uneven ground. Review of all roentgenograms of the chest showed fibrotic strands extending outwards and upwards from the left hilus to the left infraclavicular region. There was a suggestion of a small cavity at the first left anterior intercostal space. This area of pulmonary fibrosis with possible small cavity was interpreted as an old fibrotic TBC with a cavity or pseudo-cavity. The lung fields were otherwise clear. There was no appreciable change in the series of studies. Roentgenograms of the left ankle showed no appreciable change (figs. 2, 3). Suggested as causes of the probable granulomatous lesion were: "A cystic type of tuberculosis appears most likely; mycotic bone and synovial involvement; syphilis; nodular synovioma and

Fig. 2—Left lateral view of ankle including adjacent portion of foot.

Fig. 3—AP view of ankle and adjacent portion of foot.

Fig. 4A—Foot before amputation.

malignant synovial tumor." Physical examination was essentially the same as before except for the well healed scar over the medial aspect of the ankle where the specimens had been taken for biopsy.

Laboratory examinations, including culture for organisms, on two occasions were negative. There was a moderate anemia. Again on August 10, 1951, a specimen for biopsy was taken from the inner malleolar area of the left ankle. Cultures of the material were done also. The specimen consisted of pale gray fibrous tissue. Microscopic study showed tissue composed largely of cicatrizing granulomatous material. In two smaller portions there was more active inflammatory reactions similar to that previously described. A single mycotic granule was seen in this preparation. Here the hyphae were more closely evident. The central portion of the mass was composed of tangled hypha to five or six microns in

Fig. 4B—Cut surfaces (frozen-sawed) of foot. Note obliteration of many joint spaces and altered architecture from proliferation of granulomatous tissue.

Fig. 5—Mycotic granules surrounded by inflammatory exudate. Paraffin embedded, hematoxylin eosin. 180 x magnification (8″ x 10″).

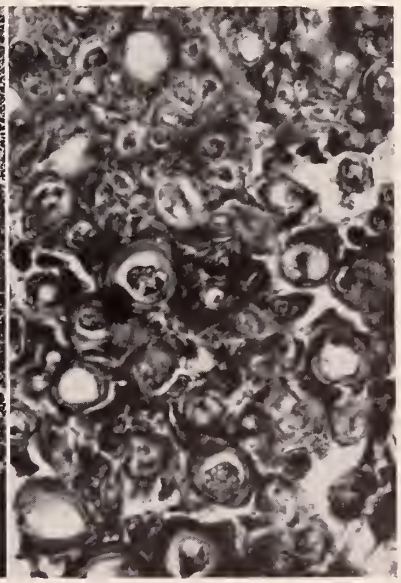

Fig. 6—Detail of mycotic organism, taken from an area included in figure 5, 975 x magnification (8″ x 10″).

diameter. Definite cilia were evident and hypha were branching. There were occasional round bodies with a central dark blue mass which resembled spores. These were are large as 8 to 10 microns in diameter. This single colony lay in the central portion of one of the more active inflammatory reactions described above. Monosporium apiospernum seemed to fit morphologic characteristics best.

Pathologic diagnosis was: "Granulomatous inflammation, probably mycotic etiology and probably Madura foot." Attempts at culturing in deep tube of thioglycolate broth, Sabouraud's agar at room temperature and 37 degrees, and blood agar at both room temperature and 37 degrees were unsuccessful.

Evaluation in April, 1952, showed no essential changes clinically or in roentgenograms of the ankle and chest.

From October 28, 1952, to May 26, 1953, this man was seen periodically because of considerable pain and swelling of the foot. He had marked anemia and a reversal of the A-G ratio. The anemia was thought to be the result of nutritional deficiencies. A gastrointestinal bleeding site could not be shown on roentgen studies. The patient was given several blood transfusions. Gall-bladder visualization revealed stones. In view of the patient's general condition, cholecystectomy was not done. A study of bone marrow was normal. Amputation was not done at this time because the patient was able to get around and had never developed any fistula in his foot, despite two surgical excisions. In the two weeks before admission on February 27, 1954, his foot became so swollen that he had to use a wheel chair. At this time there was marked swelling and induration of the left ankle and foot. Several small openings in the skin on the dorsum and bottom of the foot suggested sinus tracts. However, no drainage could be seen. The foot did not appear to be hot or red. Roentgenograms of the chest and left foot were as previously described.

Now there was only a moderate anemia. The white blood count, urinalysis, serologic tests for syphilis, and the sedimentation rate were unchanged from before. Complement fixation tests for histoplasmosis and coccidiodomycosis were all negative. Skin tests with second strength PPD, histoplasmin, and coccidioidin were negative. It was agreed that this patient needed an amputation. On March 15, 1954, this was done just below the left knee. The specimens were forwarded to the pathologist.

Gross Description: The specimen of the left foot and approximately half of the left lower leg had diffuse swelling of the ankle region of the foot which extended part way down over the dorsum of the foot with no draining sinuses evident. There were areas of scarring overlying the malleoli suggesting old draining sinuses. The foot was frozen and bisected (fig. 4, A and B). The articulation of the callus and tibia was partially obliterated as a result of dense fibrous granulation tissue which was streaked with cream colored softer tissue. This process involved the callus navicular and the callus calcaneus joints also. There was an area of dense involvement of the flexor digitorum brevis muscles which measured 1x5x3x1.5 cm. Sections were taken to include the subcutaneous granulomatous reaction and the affected muscle adjacent to the joint.

Microscopic Sections: Two sections which included the skin and subcutaneous tissue, had flecks of chronic inflammatory reaction. There were extensive old dense scarring with proliferative degenerative changes in the blood vessels and nerves. One of these sections included two abscesses. In one of these abscesses was a mass of mycotic organisms. Two smaller sections from deeper tissues exhibited a more active granulomatous process with multiple areas of suppuration surrounded by very dense collagenous tissue which was infiltrated by lymphocytes and macrophages. Here, too, were masses of mycotic organisms, in the central portion of the abscess. These bodies were 1 mm. in diameter, and were compact and stained darkly with eosin. The central portions were made up of tangled mycelian threads with many thick-walled yeast-like bodies at the periphery (fig. 5, 6). This appearance was similar to that described in the specimen from this same patient two years earlier.

"A diagnosis of Madura foot was suggested at that time and these subsequent studies would confirm the original diagnosis."

Final Diagnosis: Maudra foot, probably produced by Monosporium apiospernum.

Summary

This is the first case of mycetoma (Madura foot) reported as originating in South Carolina, Missouri, or Oklahoma. In which of these states he acquired his infection, we do not know.

In mycetoma, prognosis as to *life* is good even without treatment. Prognosis for cure of the lesion is poor and unpredictable with currently available medicines. Amputation or surgical excision are the treatments of choice. Less radical therapy may be tried first because the lesion is benign.

This case is unusual in that the patient never developed draining sinuses, even following surgical excisions for biopsy purposes. In the absence of skin reactions to second strength PPD, histoplasmin and coccidioidin, as well as negative complement fixation tests for these two fungi, the pulmonary fibrosis shown on the roentgenograms of the chest suggest the existence of pulmonary and pedal mycetoma in this case.

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"Reviewed in the Veterans Administration and published with the approval of the Chief, Medical Director. The statements and conclusions published by the authors are the results of their own study and do not necessarily reflect the opinion or policy of the Veterans Administration."

PERINATAL PROBLEMS

R. L. CRANNY, M.D.

A new term has recently been introduced into the fields of pediatrics and obstetrics. The term "perinatal" carries an all encompassing connotation, the limits of which are not clearly defined. It would seem unreasonable to speak of the third trimester of gestation to the exclusion of the other two trimesters or to include the first day of life and omit the remainder of the neonatal period. Even the neonatal period is not an acceptable age of demarcation for, as we all know, many of the most difficult problems of infancy often do not make their appearance until several weeks or even several months of age, yet in many cases the fundamental abnormality may have been present from birth. It is evident then that our boundaries are somewhat arbitrary and must include most if not all of pregnancy and at least the first two to four weeks of life, in the full term infant, and a much longer period in the premature infant. As a rule the pediatrician's responsibility begins with the birth of the infant. At times, however, his advice may be sought concerning such prenatal problems as the advisability of future pregnancies, the post maturity syndrome and erythroblastosis fetalis. Certain prenatal abnormalities frequently continue to influence the course of both the mother and the infant even after delivery. Cesarean section has been associated by some with an increase in the incidence of respiratory difficulty in the infant. It is thought that the

THE AUTHOR

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fetus may swallow or aspirate excessive amounts of amniotic fluid and that the swallowed material may be regurgitated and aspirated later. Many practitioners therefore advocate removing the infant's gastric contents soon after birth.

Infants born of diabetic mothers, besides tending to be large in size, may exhibit signs of hypoglycemia within hours after birth. Prompt and adequate glucose therapy is often necessary to avoid a tragic result.

Fetal distress is likely to occur when abnormalities of the placenta are present. If the fetus is not stillborn, anemia and shock are uncommonly found. Under even the most ideal circumstances the factor of time may be an unsurmountable one resulting in morbidity or mortality.

The post maturity syndrome has recently been reemphasized as a leading cause of neonatal death[1]. Since the post maturity syndrome is more likely to appear in the older primipara, the management of this type of patient who has exceeded the expected date of confinement by two weeks must be undertaken with great caution. Inasmuch as prematurity is accompanied by an even higher infant mortality rate than is post maturity it is desirable to avoid the precipitation of such a turn of events.

It is always distressing when, after a normal pregnancy and delivery, asphyxia of the newborn occurs. Our present methods of management can best be described as crude. The keynote in therapy is to assure the infant a clear airway. Although it is not always possible to achieve or to maintain, an unobstructed airway remains fundamental to the success or failure of management. Mild physical stimulation such as that afforded by snapping one's finger against the sole of the infant's foot or moderate massage of the affected infant's back may prove to be efficient. More vigorous physical stimulation should be avoided since it is very likely to do more harm than good. It is well to remember that the infant has been subjected to considerable physical stimulation during the process of delivery and I daresay, that arrival in the present surroundings of the outside world must in itself be considered as quite a shock to one who has led such an ideal existence for so long. Various mechanical devices have been advocated as being useful adjuncts in therapy. In certain cases they are undoubtedly beneficial, provided the instrument is skillfully used. In the vast majority of cases, however, it would seem that little or no benefit is derived from their use and there is often serious question concerning harmful effects. The administration of oxygen, either by a loosely fitted face mask or by an intratracheal catheter is to be endorsed. When performed by a skilled operator direct visualization of the upper respiratory passages may occasionally be life saving. However since the manipulation is seldom of benefit, persons unfamiliar with the technique would do well to avoid this procedure. The use of drugs, in an attempt to "stimulate the respiratory center" is mentioned only to be condemned. The narrow margin between the supposedly effective dose and a very harmful dose would indicate that these drugs should rarely if ever be used. It is evident that there is much room for improvement in the management of these infants.

Cyanosis of the newborn is usually caused by an abnormality of either structure or function or both. A useful method of approach in attempting to establish the correct diagnosis is the consideration of the most likely organ systems that may be involved. The respiratory system, the central nervous system, the cardiovascular system and the hematopoietic system must all come under consideration. As is invariably the case the most useful aids in diagnosis are a detailed history and a thorough physical examination. Awareness of the peculiarities of physical reactions to disease at this age is of extreme importance. Infection, mechanical damage, abnormal development and congenital heart disease are likely possibilities. Certain diagnostic procedures may prove invaluable as guides in the choice of therapy. Such procedures as a complete blood count, an x-ray of the chest, one or more blood cultures, a lumbar puncture and subdural punctures may be indicated. Occasionally the patient's condition is so delicate that performing these diagnostic tests imposes too great a hazard. Therapy is dictated by the paramount features of the individual case.

Interest in hyaline membrane disease has increased in recent years. This peculiar condition, which affects the lungs of newborn infants, was previously known as the "four day disease." The onset is always during the first 24 hours of life and the course, which is characterized by signs of increasing respiratory distress and thoracic retractions, may terminate in death in less than 48 hours. Survival for four days indicates a good prognosis for complete recovery. The exact incidence of the pathologic disease is, of course, unknown since the tissues of those patients who recover do not reach the pathologist for definitive diagnosis. However, the consistent correlation between the clinical syndrome and the pathologic findings in fatal cases has made it possible for the clinician to make a positive diagnosis that is probably correct in most instances. Although there is much disagreement concerning the basic pathogenesis of the disease most authorities agree that the use of continuous mist, oxygen and prophylactic antibiotics is of benefit.

The serious problem of jaundice during the immediate newborn period has troubled practitioners for many years. With the discovery of the Rh factor by Landsteiner and Weiner in 1941 the pathogenesis of many cases was more easily understood. The importance of the prenatal determination of the presence or absence of the Rh factor in the blood of both parents is self evident. Although the history concerning previous pregnancies is helpful in predicting the outcome of a given pregnancy, experience has vividly demonstrated that one must be cautious. The possibility of unknown pregnancies, previous transfusions of improperly typed blood and a variety of other ways in which an Rh negative female may become sensitized to the Rh factor or to other similar factors is now appreciated. It is well known that even when both parents are found to be Rh negative by the commonly accepted method of testing, isoimmunization of the mother may occur. Because of the rarity of occurrence of hemolytic disease of the newborn due to one of the minor blood factors such as the Hr factors, the Kell, Duffy, M or N factors, the determination of the presence or absence of any minor blood factors is of no practical importance. It is well to remember however, that cases will occur in which extensive laboratory determinations are of more than academic interest.

Liaison between the individuals responsible for the care of the mother and those persons who will assume the management of the infant is essential. Inasmuch as kernicterus is the leading postpartum complication of hemolytic disease of the newborn, the early institution of adequate preventive measures is imperative. It is now established that while anemia is the chief danger in fetal life and complications of anemia cause almost half of the deaths attributable to this disease, "kernicterus" is a postpartum development and bilirubin is the pigment found in the damaged brain cells[2]. Kernicterus is now believed to be not only preventable but, during its early stages possibly reversible. Since the introduction of exchange transfusion in the treatment of hemolytic disease of the newborn the incidence of partpartum complications due to this disease has been remarkably reduced. The occurrence of kernicterus in many large series of cases in which exchange transfusion has been used is less than 10 per cent. Recent studies have shown no incidence of kernicterus in those affected infants in whom the serum bilirubin did not exceed 15 mg. per cent. Because of the amount and type of laboratory work that is necessary to adequately manage these infants it would seem advisable for delivery to be accomplished in a hospital where adequate facilities and technical personnel are readily available. If this is not possible it may be wise to transfer the infant to such a hospital immediately after birth. Although a cord hemoglobin of less than 15 mgs. per cent is reliable indication for exchange transfusion at birth, it is well established that the serum bilirubin level is the best index thereafter. Since it is much easier to prevent the rise in serum bilirubin concentration than it is to reduce it to safe levels once it has risen we use a rise of 1 mg. per cent per hour as an indication for exchange transfusion. One must be cognizant of the fact that the cord serum bilirubin concentration will be somewhat lower than the concentration of bilirubin in the infant's serum if simultaneously collected samples are compared. Because of this, one must interpolate

the results if an apparently significant increase in serum bilirubin concentration is encountered. Repeating the determination a third time at an interval of two hours after the second determination allows one to pursue the indicated method of management with assurance as to its validity. The indication for repeating the exchange transfusion is precisely the same as it was for instituting the procedure initially, namely a rise in serum bilirubin concentration of 1 mg. per cent per hour.

Certain abnormalities in function of the endocrine system must be added to our growing list of perinatal problems. These conditions assume importance not because of their frequency but because they are not rare and at least some degree of therapeutic benefit can be expected. What would be the effect on the individual family and on the community if thyroid therapy could be inaugurated during the neonatal period in cases of cretinism? The adrenogenital syndrome which may be dificult to recognize clinically in males is usually easily diagnosed in females. At times, however, due to the marked degree of hypertrophy of the clitoris, an erroneous diagnosis of hypospadias is made. Cortisone therapy has proved to be of great value in the treatment of these patients. Those who demonstrate evidence of adrenal cortical insufficiency often require desoxycorticosterone as well as cortisone. These examples serve to remind us of the need for further study.

There is little doubt of the importance of infection as a cause of death during the neonatal period. It is indeed unfortunate that this is the age group in which the greatest diagnostic difficulties are often encountered. The usual signs and symptoms of infection may be conspicuous by their absence. The interpretation of physical findings and laboratory data must be undertaken with caution because of the inability of some infants to respond to infection. Perhaps the best criteria is a high index of suspicion by the alert physician. Prediction of the probable causative organism in a given case is influenced by the location of the infection but the vast majority of infections encountered during the newborn period are caused by a member of the coliform group, the staphylococcus, streptococcus or pneumococcus.

Vomiting is such a common symptom in infants and children that it seldom excites much concern. However persistent vomiting must be considered abnormal and a search made for the underlying cause. The immediate consequences of persistent vomiting in infancy are much more striking than those that occur in older children. Dehydration and alkalosis may appear in a matter of hours in the younger infant. A point worthy of mention is that vomiting or sometimes failure to eat may be the only physical evidence of a severe infection. One must discern between vomiting and regurgitation. Occasionally this will be most helpful in arriving at the correct diagnosis. Simple causes, such as overfeeding either in amount or in frequency must be ruled out. This is not always easy but persistence in careful history taking is usually fruitful.

Vomiting that occurs as a result of intestinal obstruction during infancy is usually a clear cut entity. An accurate description of the vomitus aids in locating the suspected lesion. As a rule in the infant who is more than six hours of age a plain roentgenogram of the abdomen is the only special study that is necessary. The inability to visualize gas in the entire bowel by this age establishes the diagnosis of intestinal obstruction.

Adrenal cortical insufficiency may be more common during early infancy than is generally suspected. Certainly it must be included in the differential diagnosis of the severely dehydrated infant that is vomiting and does not have diarrhea. Determination of the serum sodium and potassium will confirm or deny the diagnosis.

A word concerning changes in formula may be in order. It is the exceptional case in which a change in the type of formula is indicated. Frequently one change quickly leads to another until the parents, the physician, the in-laws and all of the neighbors have exhausted not only the large variety of commercially prepared milks but have also exhausted the infant. A case in point with which I have had experience was that of a 30 day old infant. The history revealed 27 different formula changes during

that time. Although the feeding problem was worse than ever the parents were proud of the fact that they had left no stone unturned in an attempt to get the best for their baby. Attention to the mechanical details of the feeding ritual with emphasis on relaxation and good technique usually solves the problem.

Although vomiting occurs for many other more benign reasons these particular entities have been given consideration because of the seriousness of the underlying pathology.

Intestinal obstruction is a surgical emergency at any age. Although the diagnosis is usually readily suspected in older children it may be unrecognized for many hours when it occurs in infants. The most important feature in the history is the presence of persistent vomiting. The presence or absence of bile in the vomitus is an indication as to whether the lesion is above or below the ampulla of Vater. The stools are invariably decreased in amount and may be absent. It is important to realize that when intestinal obstruction occurs on the first day of life the passage of one or more normal meconium stools, although seemingly paradoxical must not be considered as being against the diagnosis. The presence or absence of abdominal distension depends almost entirely on the level of the obstruction. An x-ray of the abdomen is valuable in establishing the diagnosis. The absence of air in the small bowel after six hours of age confirms the diagnosis of high obstruction which is complete. Malrotation of the bowel, complete atresia, or an obstructive band are the most likely possibilities. Further x-ray studies may establish the definite diagnosis but are not absolutely necessary prior to surgery. Because the circulation to a segment of the bowel may become embarrassed at any time early surgical intervention is indicated. If the patient is moderately to severely dehydrated a definite preoperative diagnosis is valuable. If one can be reasonably certain that the blood supply to the bowel is probably not endangered, allowing sufficient time for partial correction of the dehydration would seem wise. If one cannot be certain of this the operative risk must be weighed against the possibility of damage to the bowel circulation. The desirability of early diagnosis is readily apparent.

Prematurity is by far the most common cause of death during the newborn period. The chance for survival is directly related to the birth weight. As a rule a birth weight of no less than 2000 grams is indicative of about 90 per cent chance for survival, whereas only 50 per cent of those infants whose birth weight is less than 1500 grams but not less than 1000 grams have even a fair chance of survival. Since the majority of deaths due to prematurity occur on the first day of life the problem of prevention becomes greatly magnified. The exact cause of death cannot be determined in many cases although it would seem that failure of the respiratory system is often the deciding factor. Thus far all attempts to support this system have met with minor success at best. The use of oxygen may be helpful in all cases and most certainly must be used when indicated. However, it is well recognized that the prolonged use of excessive concentrations of oxygen probably has an adverse affect on the premature retina. The pathologic changes of retrolental fibroplasia may appear and result in partial or complete blindness. Most authorities agree that no permanent retinal changes occur when oxygen concentration does not exceed 40 per cent. Present data indicates that higher concentrations may be used for as long as seven days and suddenly withdrawn without harmful effect. Continuation of greater than 40 per cent oxygen concentration past seven days necessitates a careful stairstep decrease in oxygen concentration by 10 per cent every five to seven days[3]. Weekly retinal examination by a physician who recognizes the earliest changes of retrolental fibroplasia is essential to the success of this method. If such changes are found, a return to the next highest preceding oxygen concentration for an additional three to five days is indicated. The use of this method of management has sharply reduced the incidence of retrolental fibroplasia in all series reported.

The question of the advisability of maintaining the premature infant's body temperature within the limits that are considered to be normal for the more mature human organism remains unanswered. Sound ar-

guments can be presented in support of both views. However until adequately controlled studies have been evaluated it would seem wiser to attempt to maintain the patient's body temperature near that of the intrauterine surroundings.

Authoritative studies have clearly demonstrated that withholding all oral intake for from 12 to 16 hours is without adverse effect in any newborn[4]. Extension of this period of fasting to 48 hours and in some cases to 72 hours or longer is advisable in premature infants. This allows for the excretion of the edema fluid that is commonly present. Since the ability of the immature kidney to process solute is less than that of the more mature kidney there is a justification if not an indication for the use of a dilute milk mixture as the initial feeding. The inability to suck adequately necessitates the use of gavage feeding. This is done by means of a polyethylene gastric tube which needs to be changed but once a week.

Early reports on the prophylactic use of a broad spectrum antibiotic in all infants weighing 1500 grams or less would seem to to be favorable. Although this regimen is not in general use there is no apparent contraindication to its use when it is limited to a duration of two weeks.

The magnitude of the overall aspect of perinatal care may strike one as being overwhelming and yet we know from past experience that alertness, cooperation and perseverance always result in a better understanding of basic disease processes and ultimately in improved patient care.

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Author's Note: Only selected references in easily available publications are given here. The projected plan is to discuss each problem in detail in future articles with bibliography.
—R.L.C.

Relationship of SOCIAL WORK *to* MEDICINE

MRS. DOVE M. KULL

A half century ago, several physicians in Boston recognized the need of more knowledge concerning the environment and resources of the patient as a factor in treatment. Participation in the progress of charity organizations had brought physicians in touch with the work of social workers, who, through home visiting, became acquainted with the environment of the people they served. To give more adequate service to patients, social workers were placed in hospitals in Boston, thus utilizing medicine and social case work to achieve desirable objectives in certain types of cases.

This movement grew, gaining momentum, until now social workers are on the staffs not only of hospitals, but of private medical clinics, child guidance clinics, and psychiatric clinics. For some time, they have filled an accepted place in the public health field. They are concerned with the control of tuberculosis and education regarding special problems as mental health, rheumatic fever, heart and cancer. They are part of the team pulling to prevent, alleviate and cure disease. This joint interprofessional service now is a challenge to the participants.

THE AUTHOR

Mrs. Dove M. Kull is director of the Welfare Department of the Salvation Army. She was formerly with the Child Welfare Division of the State Department of Public Welfare and also served at one time with the Community Council of Oklahoma City. She has a master's degree in social work and has been a faculty member at the University of Oklahoma and Oklahoma City University.

What the Social Worker Brings to Medicine

A half century has produced many changes in both professions. Social workers have realized that flexibility and adaptability are essential assets in keeping pace with the rapid progress of the medical world with its new discoveries, improved techniques, and changing concepts. Social work has grown also, assuming professional stature although it may be attuned to a world not of fixed concepts, but one of eternal change requiring constant adaptability.

The philosophy of social work is democratic. It is based on a deep faith in people and their inherent right to choose and to work out their own destiny as well as their capacity to change. It is concerned with the well being of people, in health and disease, it is preventive as well as remedial. Its foundation is the profound belief in the worth and dignity of human beings.

The social worker today is the product of an accepted philosophy and a structured education. To be adequately prepared, the social worker must possess a knowledge of fundamental philosophy and basic concepts, and must have developed skills in fact-finding, study, analysis and interpretation. Since the social worker depends upon the cooperative efforts of many persons in different fields, knowledge is used from such related fields as sociology, psychology, anthropology, economics, and political science.

Teamwork Between Social Workers and Other Professional People

Social work education and experience develop the ability to integrate the many approaches to the attack on social problems and to share the results of study with others who are rightfully interested.

"To be a part of a team means that one must be extremely well prepared in his own field, that he must see himself in relation to the contribution of others . . . it means the will to pull with others and the integrity to withdraw from those parts of an undertaking that are not his. It means the enduring belief that together we can do things which none of us individually can do alone, and that the togetherness makes possible a concept of the job which is greater than the sum of the individual parts."[1]

Mutual Attitudes in Medical Social Work

One factor in medical social work is the way in which the worker relates to the physician's professional responsibilty and purpose. Another factor is the worker's capacity to interpret the patient's needs and the doctor's instructions. If the worker cannot convey his knowledge of the patient to the physician, the patient may not get the service he needs. This places great importance upon essential and suitable communication. In the hospital setting, the worker accepts the physician as the member of the team who has authority. The physician may assign the area of work to be covered by the social worker. Here again attitudes are important, and the major attitude may be that of the physician. His capacity to recognize and accept the contribution of the social worker can limit or enrich the total services to the patient.

The Social Worker's Part in Illness

The social worker, "as part of the professional team, brings to the solution of the problem created by the stress and strain of illness the same techniques and skills that characterize social work in general."[2] This skill is based upon the understanding of the dynamics of human behavior, an ability to interpret this as it concerns the individual patient, and the ability to guide him, through a case work relationship, toward maximum "adjustment to his illness in the light of the limitations it imposes."[2]

The social worker through gaining understanding of the patient can give strong psychological and social support at a time when the normal way of life may be threatened with personal infirmity, family displacement and economic breakdown. Modern medicine recognizes the patient as a person. The social worker looks to the meaning illness has to the patient, and to the areas in which help is needed.

Social work knowledge is of value as the worker is able to translate it into a useful tool to correct or prevent anxiety or personality distortions. Helping the patient to change may be a very slow process with decisions made as the patient can achieve them.

The patient's clear understanding of his illness can throw a light on his path and

change his way of life. Part of the social worker's skill is based on respect for the individual, regardless of status.

In 1939, Bob, in jail for stealing, was released to go to the hospital through the cooperation of his mother and the social worker who had known him in the orthopedic ward of Crippled Children's Hospital where he had spent considerable time. Bob, at 15, was attractive and intelligent. Released from jail, he seemed sullen and not to care. At the hospital, he spoke as if he were worthless. In the worker's daily visits, an effort was made to learn through listening for significant words and through skilled interviewing. Several times he spoke of disease as possessing his body, filling it with running sores and making him unfit to go with girls or marry.

"What do you mean by disease?", the worker asked sympathetically. He stopped a moment, staring ahead, then said in annoyance, "Syphilis. What else could it be?" This, then must be the distorting thing changing a growing boy into a criminal. The worker was familiar with Bob's chart and knew his blood test was negative. In the continuing relationship, the worker learned that an older man had told Bob osteomyelitis is caused by syphilis. The orthopedist joined the worker in reviewing Bob's chart so that Bob could understand it. The physician explained that bruises or injuries can lead to osteomyelitis. Then Bob told something he had not told his mother or the hospital, that as a child, contrary to his mother's rules, he had ridden his bicycle onto the highway. A truck could not stop in time. It struck him, but he felt only a bruise and did not tell anyone. With fears of disease explained away, Bob's attitude and behavior gradually began to change.

The social worker is prepared to do therapy by knowledge of the patient's everyday living experiences, past experiences and relationship with the family and others. As a therapist the social worker cannot impose insights on the patient who may become stampeded into withdrawal or denial, attitudes which will block out application of treatment of the patient.

The Social Worker in the Child Guidance Center

In the child guidance field, psychiatrists and psychiatric social workers have been able to unite their skills and efforts in developing a highly specialized and broad avenue of services for the child with behavior problems. The worker to be effective, must be sound in the knowledge of concepts in order to translate them into practice. The worker's skills in interviewing, fact-finding and interpretation of data often are utilized in developing a study of the child as a contribution toward the plan of diagnosis and treatment.

Psychiatric social workers share in the treatment of children and parents in guidance clinics. The psychiatrist may treat the more disturbed patients in the clinics, or he may treat the child; and the worker, the parent. Or the worker may give most of the treatment in consultation with the psychiatrist.

The psychiatric social worker may help the patient in the modification of both environment and personality. The worker participates in planning treatment, evaluating progress, and continuing a re-appraisal of progress.

The Social Worker in Relation to Psychosomatic Illness

The social worker's contribution in phychosomatic medicine is essential. Since the mind and body are recognized as reacting in unity, it is pertinent to look to the sources of emotional tensions. Chiefly, tensions flow from the home. Of the professional team working with the patient, today it is the social worker who has the most knowledge of the home and family relationships. The modern physician is prone to see the patient in his office or the hospital, therefore, he can utilize data supplied by the social worker who is familiar with the patient's home environment. The worker's relationship can lead to healing discussion with the patient and reassurance and friendly support. The worker's conference with the physician will enable both members of the team to recognize a need, if it exists, for the help of the psychiatrist.

The Social Worker's Role as a Teacher

Although workers realize the interpretative nature of much of their work, they do not accept their roles fully as teachers. The physician of the future is developing a broad concept of his responsibility to his patient. With adequate instruction while he is a student, he can accept social work as a sound extension of his service. Teaching may stem from conferences or become formal as in a

seminar or medical curricula covering such areas as social and emotional factors in illness, meaning and function of social service in hospital or clinic, interviewing, recording, and practice in team relationships.

The Social Worker and the Physician With the Community as a Patient

The promotion of good health, the prevention of illness, and the control of disease are aspects of the area of work in which the social worker and physician attend the whole community as the patient. This requires a knowledge of community resources and facilities, understanding of group and mass psychology and the ability to act in a crisis for the welfare of the community.

The development of a permanent health and welfare program must be approached on "a basic social work premise, namely, that successful treatment of social problems must be based on a recognition of the problems and a willingness to do something about them by the people most concerned."[3] Communities, like individuals, may not respond favorably to the presentation of a ready made health and welfare program, drawn up without community participation. Community organization is the key to developing health programs. "People use services they believe in and understand."[3]

This means working with acknowledged leaders. The Community Council, if the locality has one, may be a medium of approach. Such Councils are made up of representative professional and lay members from agencies, organizations, business and homes.

The social worker can help to guide and direct health services to where the people can understand and share in the expression of their needs and participate in developing a program to meet these needs. With this approach, the two professions can work jointly to promote specialized services in community health and welfare.

Conclusion

On the quality of case worker practice rests effectiveness of service to the patient, the physician, the hospital or clinic and the community. The quality of social work depends upon the competence and caliber of the people employed to administer it. The worker most likely to succeed in medical teamwork is one who has the ability to make quick yet sound decisions, and has the courage to act.[4] The social worker must have the capacity to work with others and the ability to get people to work together to promote the well being of fellow men or "to minister to those who are experiencing some breakdown in their capacity to cope unaided with their own affairs."[5]

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"Polio Pioneers" To Get An Additional Shot

An additional shot of polio vaccine will be offered to the children of Tulsa and Oklahoma counties who were "polio pioneers" in the field trials of 1954. The decision to request more vaccine from the National Foundation for Infantile Paralysis was made by Dr. Grady F. Mathews, Commissioner of Health, following meetings held recently in Oklahoma City and Tulsa.

The purpose of the extra shot is to bring this group of children up to the same standards of immunity which were made available to children who began their series of shots after the initial, experimental tests. It was determined by Dr. Jonas Salk that the vaccine used in Tulsa and Oklahoma Counties during the nationwide test was weakened as a result of the merthiolate preservative used. For that reason, he recommended that a supplemental shot of the newer, more potent vaccine be given.

Represented at the meetings were the following groups: the State Health Department's Advisory Committee on Polio, the Oklahoma City Pediatric Society, the Tulsa County Medical Society's Committee on Polio, the Health Departments of both counties, the State Academy of General Practice and the Oklahoma State Medical Association. Dr. Albert Engelbach and Mr. Frank Chappell, regional consultants for the National Foundation, were also present.

Association Activities

PRESIDENT'S LETTER

It became necessary to have a meeting of the Council of the Oklahoma State Medical Association on August 14, 1955 to discuss and take action on a few problems that were pressing. The main topic discussed and the one on which every councilor was willing to stand and be counted was the change that has been affected in the care of crippled children of Oklahoma. The following is the unanimous recommendation of the council:

> "The Association is in favor of keeping children in their home communities for their medical and hospital care under the Crippled Children's Commission program as practiced prior to July 1, 1955. The Association is also in favor of the physicians continuing to give their services without fee as has been done in the past, and that teaching cases or such cases as require specialist care which cannot be obtained in the local communities continue to be referred to the Crippled Children's Hospital in Oklahoma City. This procedure will continue to assure the accreditation of the University of Oklahoma School of Medicine.
>
> "The Association has refrained from a previous statement in the hope that the special committee appointed by Governor Gary the first part of July would have its study completed before any action was taken by the Crippled Children's Commission in changing its program.
>
> "Since there has been no public statement made by the Chairman of the committee as to when the special committee will meet, the Association feels that it should no longer refrain from an expression of opinion."

The council, as anyone can see from the above statement, concluded that only one problem obtains—namely: The best care for the recipient children; other organizations, institutions, individuals with possibly other interests notwithstanding.

Each of you has probably received reports from different organizations with figures and statements that show variances. In the writer's opinion, after thorough study of these statements and other reports, the whole story is told in neither report.

Your council took the action it did to be effective until a further study and report is made by the committee appointed by Governor Gary.

R. Q. Goodwin

President

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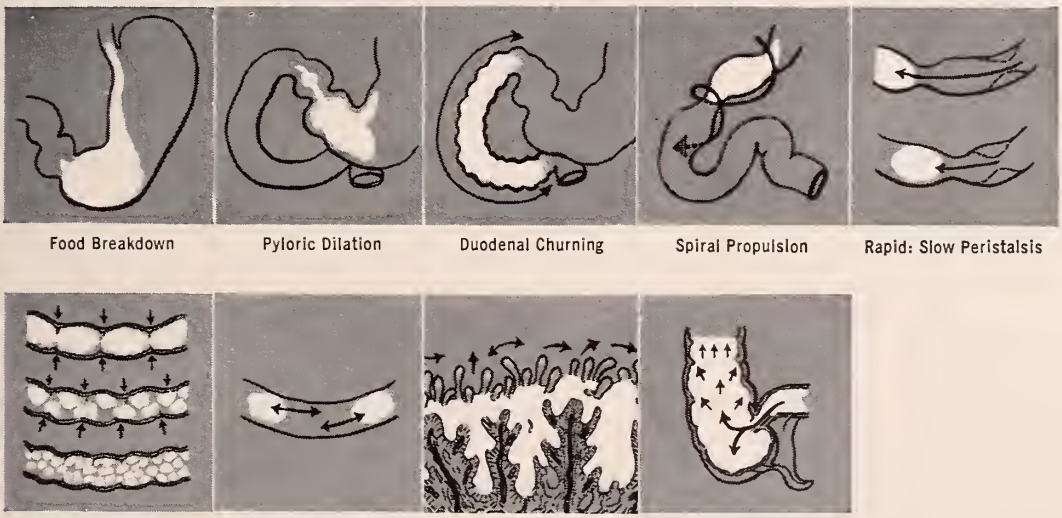
TYPES OF MOVEMENT WITHIN THE BOWEL



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W. H. WHEIR, M. D., F. C. C. P.
S. VICTOR YEAKEL, M. D.

July 20, 1955

Editor
Oklahoma State Medical Journal
Oklahoma City, Oklahoma

Dear Sir:

I was fortunate enough to receive a letter from a friend of mine in Tulsa enclosing a copy of your latest necrology report, approved by your Journal and House of Delegates of the Oklahoma State Medical Association, concerning my demise, February 1, 1955. On the basis of this report, I have made extremely unsuccessful attempts to collect my insurance and to have my name removed from the income tax files. They seem to feel, that in view of my present physical condition, this report in your journal, is insufficient proof at the present time.

I would appreciate it greatly if some notice could be placed in your next issue to the effect that, although I no longer reside in Oklahoma, I am still kicking around as well as ever. I realize that living in Texas may be construed by good Oklahomans as the same thing, but, if so, the date should be changed to November 2, 1954.

Thanking you for your cooperation and may I continue in "good health" with your consent, I remain

Very sincerely,

Prescott H. Haralson M.D.
Prescott H. Haralson, M. D.

PHH:mp

The State of Texas
County of Potter

Before me, the undersigned authority, a notary public, in and for said county and State, on this day personally appeared Prescott H. Haralson Known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this 20 day of July, 1955

G. L. Lester
Notary Public, Potter County, Texas

Pioneer Physicans' Stories Are Now Tape Recorded

Through the efforts of the Oklahoma State Medical Assistants Society, early day experiences of Oklahoma's pioneer physicians are now tape recorded. Stories that would otherwise be lost to medical history are now permanently on record.

A graphic example of this was recently illustrated by Jim Babcock of the Department of Achives of the University of Oklahoma. He reports that just a few weeks before the death of W. W. Rucks, Sr., M.D., outstanding Oklahoma City physician who died July 14, his reminiscences were recorded by Jack Saunders of the Archives Department.

The recorder and a supply of tape was given to the Department of Archives for the recording of medical history as a state project of the Medical Assistants. First tape recordings were made during the annual meeting in Tulsa in May.

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Book Reviews

CIBA FOUNDATION COLLOQUIA ON ENDOCRINOLOGY. The Human Adrenal Cortex. Vol. VIII. Edited by G. E. W. Woestenholme. Little, Brown and Co., Boston. 1955.

This volume is the transaction of a panel gathered by the Ciba Foundation in London early in 1954 for the purpose of correlating the extensive recent literature on the adrenal cortex. It is noteworthy that the meeting marked the centennial of the pioneer investigations of Thomas Addison in the same city.

Within the 658 pages of the book are 35 formal presentations and considerable informal discussion among the 60 participants, yet excellent continuity has been maintained. The discussants are outstanding contributors to representative phases of the subject who have presented their data and expressed their opinions in a most worthwhile manner.

The first part of the volume is concerned with basic aspects of adrenal cortical histology, chemistry and physiology and the second part emphasizes clinical aspects of the subject.

There is considerable discussion of histological and histochemical changes in the adrenal gland following various stresses, particularly insofar as the significance of shifts in lipid patterns. The surprising enlargement of the zona glomerulosa of the adrenal cortex after chronic administration of cortisone is ascribed to the state of hypokalemic alkalosis provoked by cortisone and not the direct stimulation of the gland by the flucocorticoid. Hypertrophy of the zona fasciculata of the adrenal cortex in the inmates of German concentration camps is held to be due to the increased demands for glucocorticoids necessary to convert muscle protein into available carbohydrate. This finding is contrasted to the adrenal cortical atrophy seen in retreating Japanese soldiers who existed for long periods on sugar cane and roots. Present status of the painstaking

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Bronchial asthma
Inflammatory skin conditions

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work of elucidating the intermediary metabolism of the adrenal cortical steroids is summarized and discussed in a straightforward manner. Evidence is presented to support the view that the primary defect in the adreno-genital syndrome is the relative deficiency of a 21-hydoxylase in the adrenal cortex with resultant production of androgenic by-products. There is increased production of pituitary corticotropin to aid the crippled glucocorticoid production which further intensifies androgen production. The beneficial effect of glucocorticoid replacement in correlating this situation is described.

Aldosterone, the highly potent naturally occurring mineralocorticoid, receives its full share of attention though much of the work presented was hampered by the small amounts of the material available. Patients with Addison's Disease treated with aldosterone in doses of 150-200 micrograms daily showed excellent response with rapid onset of effect, regression of skin pigmentation, orthostatic blood pressure regulation, normal salt and water conservation without edema and return of glusose tolerance.

Cushings Syndrome is covered in some detail. It was agreed that in those cases without adrenal tumor irradiation of the pituitary is therapeutically effective.

Experience with adrenalectomy and hypophysectomy in the human being is presented.

Changes in adrenocortical excretory patterns are described during combat stress as well as various other psychological situations.

The encyclopedic nature of this volume and the competence of its contributors qualifies it as a valuable compendium of a large part of the welter of data available on the adrenal cortex.—Robert W. Payne, M.D.

THE HISTORY AND CONQUEST OF COMMON DISEASES. Edited by Walter R. Bett, M.R.C.S. etc, with contributions by 17 collaborators. Cloth. $4.00 Pp. 334. University of Oklahoma Press. Norman, Oklahoma.

This book is a compilation of essays on

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Inflammatory skin conditions

diseases which have commonly plagued mankind since antiquity. Each essay has been written by an expert on the disease being discussed. The writings are distinguished not only for their completeness but also for the frequent dashes of wit which spice sometimes rather dry discourse.

The chapter on Tuberculosis will be of especial interest to Oklahomans because it was the last formal piece of writing from the facile pen of our late, great, Lewis Moorman.

The editor, in his preface, states that the book is intended mainly for patients but his arrows fly far beyond this mark because the subjects have, of necessity, been treated too profoundly for the average lay reader. The plentiful references appended to each chapter lead to numerous obscure English and continental sources that will appeal more to the serious student or medical historian than to the layman.

This book will find its most appreciative readers amongst the ranks of medical students and physicians.

It can be highly recommended to these groups.—John G. Matt, M.D.

PERINATAL MORTALITY IN NEW YORK CITY, A Study of 955 Deaths Reported by Schuyler G. Kohl, M.S., M.D., D.P.H. Published for the Commonwealth Fund by Harvard University Press, Cambridge, Mass. 1955. Price $2.50.

The author has made an attempt to classify and categorize the outstanding features that contributed to infant mortality in New York City during 1950 and the first quarter of 1951. In an attempt to evaluate the data thoroughly a sample of 1,000 cases, selected on the basis of the percentage distribution during 1949, was compared with the city as a whole. As would be expected, many of the percentages did not hold true and additional patients had to be selected. A further selection was made in that only patients weighing over 1,000 grams at birth were included.

Three groups of patients were studied: stillborns, neonatal deaths within the first five days and neonatal deaths between the sixth and thirtieth day. An impartial and well qualified group studied the cases from the standpoint of "preventability," and "responsibility." Certain conclusions are drawn and enumerated.

"Responsibility factors" were assigned on a percentage basis for the deaths studied. Unavoidable disasters accounted for 55 per cent of the total. High "preventability rates" were found for both premature and mature infants who died during labor.

A comparison of the autopsy findings with the cause of death appearing on the death certificate revealed an agreement in only 50 per cent of the cases whereas agreement was found 70 per cent of the time between the autopsy findings and the clinical cause of death. This would cast serious doubt on the validity of vital statistics reports prepared from data on death certificates. Only six per cent of the cases exhibited no disagreement between the death certificates and the clinical history.

The author suggests that if a panel is to used in this type of study they should pass on all cases and not selected ones and that cases should be resubmitted from time to time to assure consistency.

This report represents a fresh and welcome approach to the study of a difficult problem. Although the report has almost no practical value in its present form, since what was true in New York City in 1950 may not have been true for other communities at that time or at the present time, certain follow-up studies that the author mentions may prove to be of great value.—Robert L. Cranny, M.D.

SHOULD THE PATIENT KNOW THE TRUTH? A Response of Physicians, Nurses, Clergymen, Lawyers. Edited by Samuel Standard, M.D., and Helmuth Nathan, M.D. Springer Publishing Company, Inc., New York, 1955. Cloth, pp. 159. 1955. Price $3.00.

The well qualified group of authors who composed this interesting symposium handle every facet of a complex ethical question, "Should the patient know the truth about his disease?" The concensus is that no single, unequivocal reply can be given. The problem is explored from the ethical, religious, and medical point of view. Everyone agrees that the over-riding consideration is the welfare of the patient. What the patient is told

must be determined by the nature of the disease and by the psychological and religious needs of the patient. If the disease offers no hope of recovery, the physician is governed largely by his knowledge of the patient in telling him the truth. The strong, well-integrated personality may be inspired to live his last days more nobly if he realizes how few they are. Many patients do not want to be told the truth. Others may be comforted by the last rites administered by their particular communion. The physician who may be governed by neurotic impulses in his patient relationships is cautioned about the manner in which he handles this delicate situation.

The authors agree that telling the patient the truth about his malady in fatal cases depends upon sensitive balances, and that in hopeful cases the whole truth may be necessary to engage the patient as an ally in bringing about his recovery.

Like the solution to the problem of good and evil offered in the Book of Job, no unalterable answer can be given to the query propounded in these brief essays. But, also like the Book of Job, the catalog of possible solutions is reviewed. The reader must not expect to find untapped nuggets of wisdom

John F. Burton, M. D., Named To A.M.A. Review Committee

John F. Burton, M.D., Oklahoma City, has recently been appointed by the speaker of the A.M.A. House of Delegates, E. Vincent Askey, M.D., to a seven man committee to review the functions of the Joint Commission on Accreditation of Hospitals.

Others serving on the committee are: W. C. Stover, M.D., Boonville, Ind., chairman; Gerald D. Dorman, M.D., New York; George F. Gsell, M.D., Wichita, Kansas; Eugene F. Hoffman, M.D., Los Angeles; T. C. Terrell, M.D., Fort Worth, Texas; and George A. Unfug, M.D., Pueblo, Colo.

The committee hopes to submit a report to the A.M.A. House of Delegates at the meeting next June concerning its findings.

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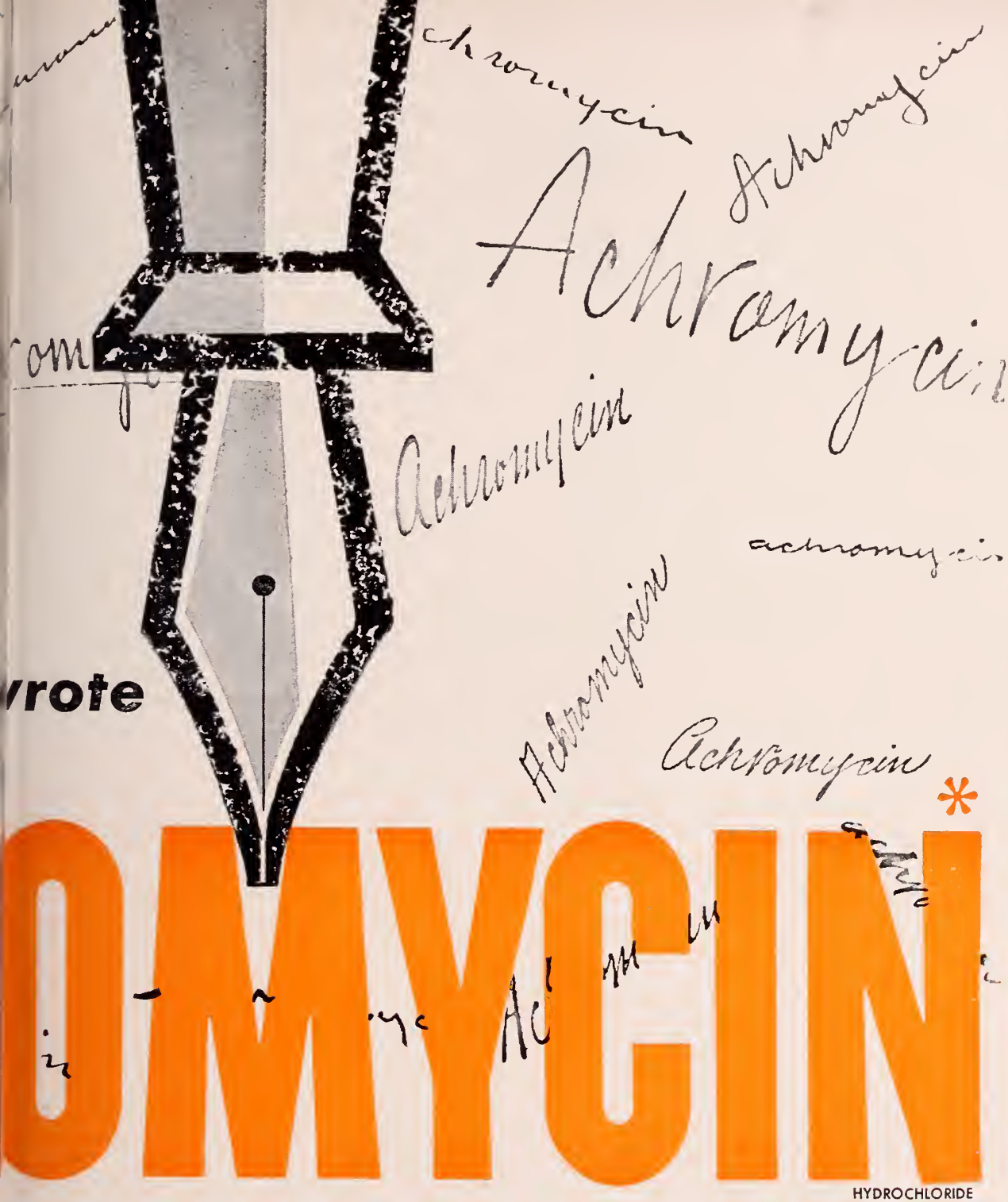

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Deaths

JAMES I. LYON, M.D.
1870-1955

J. I. Lyon, M.D., retired Edmond physician, died July 11 in an Oklahoma City hospital following a long illness.

A native of Cedar county, Mo., Doctor Lyon attended Warrensburg State Normal college and received his medical education at Kansas City Medical College. He practiced in Humansville, Mo. before moving to Oklahoma in 1889, settling in McLoud. After 10 years he moved to Oklahoma City where he practiced until 1911 when he moved to Edmond. Active in community projects, he was a former member of the school board, a member of the Masonic lodge and the First Christian church. He was an Honorary Member of the State Medical Association.

S. M. TONEY, M.D.
1881-1955

S. M. Toney, M.D., pioneer Bryan county physician, died at his home in Bennington July 12 following a long illness. He had lived in Bennington since early statehood.

Doctor Toney was born at Hawkins, Texas, November 7, 1881. He received his medical education at Physicians and Surgeons College, St. Louis.

T. L. HENRY, M.D.
-1955

T. L. Henry, M.D., who practiced medicine in Latimer County for 44 years, died July 27 after a long illness.

Doctor Henry graduated from the Arkansas School of Medicine in 1910, settling near Patterson, Okla.

WILLIAM J. WHITAKER, M.D.
1883-1955

William J. Whitaker, M.D., retired Pryor physician who had made his home in Dallas for the past eight years, died in a Dallas hospital August 2 after a short illness.

Doctor Whitaker operated a hospital and practiced in Pryor many years until his retirement in 1942. He was a native of North Carolina. Funeral services were held in Pryor.

J. A. DILLARD, M.D.
1884-1955

James Albert Dillard, M.D., Waurika physician for the past 17 years died July 30.

Doctor Dillard was born December 9, 1884 at Melbourne, Ark. He attended the University of Arkansas Medical School and took postgraduate work at Chicago Polyclinic and the University of Chicago. He came to Oklahoma in 1921 and practiced in Kingfisher and Roger Mills counties before coming to Waurika.

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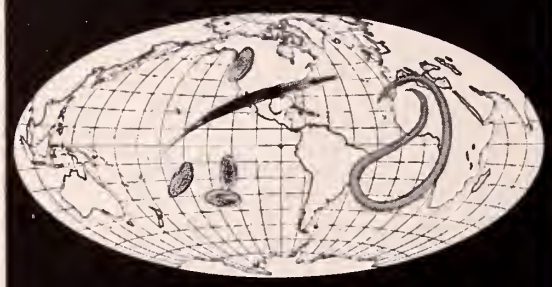

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New A.M.A. Drug Evaluation Program Outlined

A new program to give physicians timely information on the usefulness and safety of new drugs was announced by the Council on Pharmacy and Chemistry of the American Medical Association.

The council's announcement, in the July 30 *Journal of the American Medical Association*, is the first in a series by A.M.A. councils on programs inaugurated to replace various "seal-acceptance" activities discontinued in February.

The council will examine available published and unpublished evidence relating to the actions, uses, dosages, hazards, and other properties of drugs. It will not conduct clinical and laboratory tests. Reports of these evaluations will be published for the information of the medical profession.

For many years A.M.A. councils have evaluated products used by physicians and the public. In those programs, council seals were awarded to manufacturers and distributors of drugs, foods, devices, and cosmetics that met acceptance requirements.

"The evaluation of a multitude of individual brands, rather than classes of products, became so time-consuming that it threatened to inferfere with the broader aspects of the council programs," an accompanying Journal editorial said. " . . . new and more effective programs are being adopted by the scientific councils — programs that do not require the inspection of individual products or the issuance of seals."

After council members and other recognized experts have considered the scientific clinical and laboratory evidence, evaluation reports will be published in the *Journal* of the A.M.A. and in the council's annual publication, New and Nonofficial Remedies. Firms will be given an opportunity to comment on the reports before publication and due consideration will be given to their comments.

The council will not endorse, recommend, or guarantee any individual brand or preparation of a drug prescribed in New and Nonofficial Remedies.

Each drug evaluated by the council will be described by a common or non-brand name.

ANNOUNCEMENTS

Oklahoma City Clinical Society

October 24, 25, 26, 27, 1955. Biltmore Hotel, Oklahoma City.

A.M.A. Clinical Session

November 29-December 2, 1955. Boston.

Oklahoma Academy of General Practice

February 6-7, 1956, Tulsa Hotel, Tulsa, Oklahoma.

Oklahoma State Medical Assoication

May 6, 7, 8, 9, 1956. Municipal Auditorium, Oklahoma City.

Endocrine Society

Seventh annual postgraduate assembly, Indiana University School of Medicine, Indianapolis, September 26-October 1, 1955. Information regarding the program is available from the Postgraduate Office, Indiana University School of Medicine, 1100 West Michigan, Indianapolis 7, Ind.

American Urological Association

Urology Award particulars available from the Executive Secretary, 1120 N. Charles St., Baltimore, Maryland. Annual meeting will be held May 28-31, 1956, Statler Hotel, Boston.

American Congress of Physical Medicine and Rehabilitation

33rd Annual session, August 28-September 2, 1955, Hotel Statler, Detroit. Additional information can be had by writing the Congress at 30 N. Michigan Ave., Chicago 2, Ill.

American Goiter Association

Van Meter Prize Award of $300.00 is offered by the association for the best essay submitted concerning original work on problems related to the thyroid gland. Additional information can be obtained from the secretary, John C. McClintock, M.D., 149½ Washington Ave., Albany, N. Y. January 1, 1956 is the deadline for submission of essays.

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

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Brown, H. W.: J. Pediat. 45:419, 1954.

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Have You Heard?

COOPER D. RAY, M.D. has opened his office in Altus. He graduated from Washington University School of Medicine in St. Louis.

LT. COL. RICHARD M. BURKE has been released from service and has re-opened his office in Oklahoma City.

H. K. BAILEY, M.D., a University of Oklahoma School of Medicine graduate, is now practicing in Dewey.

RICHARD L. WINTERS, M.D., University of Oklahoma graduate, has joined the Lowrey-Cunningham clinic in Poteau.

FRANCIS W. HOLLINGSWORTH, M.D., has returned to El Reno after serving a residency at Wesley Hospital in Oklahoma City.

M. H. NEWMAN, M.D., Shattuck, has been named to the State Board of Medical Examiners.

HARVEY D. ELKOURI, M.D. and MELVIN ARTHURS, M.D., have opened a clinic in Hinton. Both are graduates of the University of Oklahoma School of Medicine.

CHARLES D. HOLLAND, M.D. has opened his office in Broken Arrow.

TEX STONE, M.D. has joined BILL MCCURDY, M.D. and GEORGE LONG, M.D. in practice at the McCurdy Hospital and Clinic in Purcell.

WILLIAM A. GEIGER, JR., M.D. and WILLIAM G. MAYS, M.D. has opened the new Fairfax Clinic in that city.

DAVID FRIED, M.D., Mangum has been elected secretary of the American Medical Society of Vienna. He is attending the "Zeugnis" course in general surgery and urology at the University of Vienna Postgraduate School of Medicine.

ARTHUR W. BUSWELL, M.D., a graduate of the University of Oklahoma School of Medicine, has opened his office in Hennessey.

DAYTON ROSE, M.D. has reopened his practice in Okemah following his army service and residencies in Oklahoma City.

DAVIS T. HUNT, M.D., Mooreland, has been notified of his appointment to associate membership of the Committee on Trauma of the American College of Surgeons, Dist. 4.

QUENTIN T. BROOKS, M.D., is now associated with C. D. CUNNINGHAM, M.D., Ardmore. He has just completed a residency at Wesley Hospital, Oklahoma City.

(Continued on Page 328)

Home Medication . . .

The direction circular included in all packages of Bayer Aspirin has recently been published in full pages in leading national magazines reaching well over seventy-five million. Quoted below is a prominent paragraph from these directions.

IMPORTANT NOTICE!

The dosages of Bayer Aspirin recommended in these directions are appropriate for the aches and pains that may be treated by home medication. If these dosages do not bring relief and the pain persists, it is an indication that this particular pain is of a nature that requires the attention of a physician. Under these conditions, don't experiment with any other home medications. Consult your physician. He is the only one qualified to diagnose the cause of the persistent pain and prescribe the remedy best suited to your individual needs. This is particularly true of continuing severe pains of Arthritis, Rheumatism, Sciatica, Bursitis and Neuritis.

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HAVE YOU HEARD

(Continued from Page 326)

R. L. CURTIS, M.D., University of Oklahoma School of Medicine graduate from Oklahoma City, is now on duty in Heidelberg, Germany with the 130th army station hospital. He is a captain.

HUGH H. CONNOR, M.D. and JOHN H. ENNIS, M.D., both University of Oklahoma School of Medicine graduates, have opened their new hospital and clinic in Cyril.

WILBUR G. LAWSON, M.D., pediatrician, has joined the Newman Clinic in Shattuck.

PAUL V. ANNADOWN, M.D., Sulphur, was honored on his 72nd birthday with a party in Platt National Park. Approximately 350 of his friends from the surrounding area attended the celebration.

C. E. CALHOUN, M.D., Sand Springs physician who has been in practice for 52 years, will close his downtown office in September and practice from his home.

JOSEPH G. SMITH, M.D., Bartlesville, has given the Department of Archives at the University of Oklahoma his obstetrical records from 1911 to 1955. His records 1903 to 1910 were destroyed by fire.

H. A. ELLIS, M.D., pioneer Kiowa physician who has practiced medicine 56 years, was honored with a Doctor Ellis Day recently. Approximately 2,000 people gathered for the celebration. Stores and business houses in Kiowa closed for the celebration and a rodeo was held in the afternoon following a barbecue at noon.

Named Pediatrics Head

Dr. Henry B. Strenge became the first fulltime head of the Department of Pediatrics at the University of Oklahoma School of Medicine on July 1, 1955. He succeeds Dr. Clark H. Hall, a practicing pediatrician, who will continue as professor of pediatrics. This is in line with the school's policy of having fulltime men to head the major clinical departments.

A graduate of Yale University School of Medicine, Doctor Strenge interned at New Haven Hospital, New Haven, Conn. He completed his residency work in pediatrics at Strong Memorial Hospital, Rochester, N. Y. Doctor Strenge has been on the University of Oklahoma faculty since 1947.

Announcing The Twenty-Fifth Annual Conference of the

OKLAHOMA CLINICAL SOCIETY—OCTOBER 24, 25, 26, 27, 1955

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ELMER HESS, M.D., President, AMERICAN MEDICAL ASSOCIATION, Erie, Pennsylvania

JAMES H. ALLEN, M.D., *Ophthalmology*, Professor and Chairman, Department of Ophthalmology, Tulane University of Louisiana School of Medicine, New Orleans, Louisiana.

EDWARD P. CAWLEY, M.D., *Dermatology*, Professor and Chairman, Department of Dermatology and Syphilology, University of Virginia Department of Medicine, Charlottesville, Virginia.

RICHARD V. EBERT, M.D., *Medicine*, Professor and Head, Department of Medicine, University of Arkansas School of Medicine, Little Rock, Arkansas.

KEITH S. GRIMSON, M.D., *Surgery*, Professor of Surgery, Duke University School of Medicine, Durham, North Carolina.

JOHN R. HANNAN, M.D., *Radiology*, Clinical Instructor in Radiology, Western Reserve University School of Medicine, Cleveland, Ohio.

ARILD E. HANSEN, M.D., *Pediatrics*, Professor and Chairman, Department of Pediatrics, University of Texas School of Medicine, Galveston, Texas.

CARL P. HUBER, M.D., *Obstetrics*, Professor and Chairman, Department of Obstetrics and Gynecology, Indiana University School of Medicine, Indianapolis, Indiana.

RAYMOND J. JACKMAN, M.D., *Proctology*, Associate professor Proctology, Graduate School of Medicine, University of Minnesota, Rochester, Minnesota.

EMANUEL M. PAPPER, M.D., *Anesthesiology*, Professor of Anesthesiology, Columbia University College of Physicians and Surgeons, New York City, New York.

HOMER E. PRINCE, M.D., *Allergy*, Clinical Professor of Medicine, Baylor University College of Medicine, Houston, Texas.

CLYDE L. RANDALL, M.D., *Gynecology*, Professor of Obstetrics and Gynecology, University of Buffalo School of Medicine, Buffalo, New York.

LOWELL A. RANTZ, M.D., *Medicine*, Professor of Medicine, Stanford University School of Medicine, San Francisco, California.

EDWARD B. SMITH, M.D., *Pathology*, Professor and Chairman, Department of Pathology, Indiana University School of Medicine, Indianapolis, Indiana.

DANA M. STREET, M.D., *Orthopedics*, Chief, Orthopedic Section, Veterans Administration Medical Teaching Group Hospital. Memphis, Tennessee.

EVERETT D. SUGARBAKER, M.D., *Surgery*, Surgical Staff, St. Mary's Hospital, Jefferson City, Missouri.

THEODORE A. WATTERS, M.D., *Psychiatry*, Clinical Professor of Neuropsychiatry, Louisiana State University School of Medicine, New Orleans, Louisiana.

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REFERENCE: 1. Robinson, R. C. V., *J.A.M.A.* 157:1300, April 9, 1955.

Editorials

The Crippled Children's Commission

Perhaps if the problems involved in the administration of the programs for the care of children who are without means were spread out and the tools to work with were placed beside the problems, those medical men in any sort of advisory position could help in the solution in one way or another.

The Problem

The only problem is the care of these children in such a way that the children's care is adequate and in such a way that the Children's Hospital can maintain its proper student-patient ratio for accreditation provided that this provision of the Crippled Children's Act shall not cause undue hardship on the patient. This is an obligation imposed by law on the Commission.

The Facilities for the Care of Children

1. The Oklahoma Hospital for Crippled Children, including its clinics and its laboratories has been designated as a service institution for the physically handicapped children of the State by the legislature. This means that the hospital has the duty of providing service as well as the duty of providing the clinical facilities for teaching and training as part of the School of Medicine.

2. Many private, municipal or county and voluntary hospitals scattered over the state have been approved by the Commission for the type service that their respective staffs are qualified and equipped to render.

3. Convalescent Hospitals—Children who are recovering from protracted illness such as rheumatic fever, poliomyelitis, osteomyelitis, are taken care of in convalescent hospitals when special hospital care is no longer required but they are not yet ready to go home. These services for the most part are provided by the Children's Convalescent Home at Bethany and the Children's Medical Center in Tulsa.

4. The Cerebral Palsy Institute at Norman provides training for children who are trainable and who have some motor disability.

5. The Speech and Hearing Clinic provides help to those children who have defective speech or hearing or both.

6. The Rehabilitation Center at Okmulgee provides training for children whose physical equipment precludes their employment for ordinary jobs. For example, a boy whose heart has been severely damaged by rheumatic fever may be taught to repair watches and clocks.

7. Certain children at times require boarding home care.

All these facilities are available and are needed. They must be used or they will wither on the vine. The service they render must be paid for or they cannot continue to exist.

The Tools

There are only two tools involved (1) Technical skill and (2) money.

1. Most of the medical and dental Technical skill is provided without cost to the State by members of the medical and dental professions. This is one big reason why we of the medical profession should concern ourselves with the whole program.

2. The money comes from several sources, but as a tool to work with its sources may limit its complete usefulness.

a. By direct appropriation to the Commission the legislature provides $630,000. A portion of this is earmarked for the Speech and hearing Clinic and a portion for the Cerebral Palsy Institute.

b. The Federal Government provides $200,000 with some strings on what type of patient it can be spent.

c. The legislature made it mandatory for the Board of County Commissioners of each county to include in their estimate to their respective Excise Boards an amount equal to 20 cents for each $1,000.00. "The appropriation should be known as the Crippled Children's Budget Account." The total amount for 1954-55 was $347,153.00.

1. The county judge must approve the application for care.

2. Not more than 20 per cent of the county's total budget account can be spent

on any one child in one year regardless of how much may be left in the fund.

3. None of this budget account may be spent for care in any state institution. None of this money can be paid to the Crippled Children's Hospital. In Oklahoma County where most of the indigent children receive their outpatient care at Crippled Children's Hospital, it would be normal procedure for them to be hospitalized at Crippled Children's Hospital when hospitalization is indicated, but county budget funds cannot be used for this.

4. This county budget is not cumulative. Any unused funds simply remain but the appropriation for the subsequent year can be reduced by that amount and remain in the county's general fund.

5. The county cannot be held responsible for the payment of more money than is in its budget account.

In the last fiscal year only a little over half of the county budget funds were used. Obviously a means of using these funds to the fullest possible extent must be found.

d. Of the sales tax collected, one per cent goes to the care of indigent children. The sum amounts to some $400,000 per year, is administered by the Department of Public Welfare and is available for use by the Commission for children's care. Full advantage of this fund has not been taken either. Two points are not clear—the character of the means test that is applied by the Welfare Department and do county judges hesitate to commit children who are already being assisted by the welfare department. Commitment papers must be signed by the county judge before county budget funds may be used.

Where it is necessary for some type of means test to be applied, some type of formula is required. This formula may consider only the individual means, without regard to the cost character of the sickness in question. Some discretionary powers must be permitted the person or agency who has the duty of deciding whether a patient is entitled to care.

No attempted solution of any difficulties is intended. It is, however, entirely possible that the governor's study committee will come up with something of a permament solution. There would be a better chance of this if fewer of the committee members were biased, but their familiarity with the problems may offset this. Like oil and water, service and red tape do not mix. Perhaps the study committee can find ways to cut away a lot of it.

The Teaching Case

This term has been bandied about in the newspaper in a manner that is ridiculous. Any human being who is in need of help medically presents a learning situation for the student of medicine, the student of nursing the resident house officers, the nurses, the doctor in charge of the patient, the consultant, and the rest of the staff. It is true that there are rare diseases and uncommon manifestations of common diseases which the teacher is anxious to show his students, just as there are rare flowers or unusual shades of color in common flowers that the flower grower likes to show his friends or colleagues. There is however, no such thing as the teaching case and the non-teaching case. A patient may be admitted because he is a good teaching case, but needing admission he will not be turned down because he is not.

On the clinical faculty of the University of Oklahoma School of Medicine there are those whose primary interest is research; there are those whose primary interest is teaching; there are those whose primary interest is service. It is necessary for clinical department heads to be able and willing to coordinate these interests. If the interest in service lags, the doctors and the citizens of the state who are involved are offended, and the students are not given the correct concept of the doctor's function in society. His particular interest will be developed later. The department heads must see that their departments are geared for service, but they cannot do this if funds are not available for inpatient care. It would, of course, help if there were no unnecessary delays in the study and treatment of patients and no delays in his discharge from the hospital when all this is finished.

The Medical School is here to stay; let's quit complaining and help wherever we may live and practice. One staff man who offends is no more the school of medicine than one preacher or priest is the church.

Case Report

GOITER *Occurring During* COBALT THERAPY

J. NEILL LYSAUGHT, M.D.

THE AUTHOR

J. Neill Lysaught, M.D., Oklahoma City, is a pediatrician. He was graduated from the University of Kansas School of Medicine.

For more than 30 years, it has been known that the administration of cobalt will produce polycythemia in many species of animals including man. In man, this polycythemia is absolute and is due to increase in the circulating red cell mass[1], as indicated by reticulocytosis and by an increase in the erythroid cells of the bone marrow without any enlargement of the plasma compartment. There is a decrease in the size of the red cells so formed and a drop in their mean corpuscular volume. However, these erythrocytes contain no abnormal hemoglobins, and their hemoglobin seems to have a normal capacity for oxygen transport[2].

Many observers concur that the onset of erythropoietic effect on bone marrow of administered cobalt is quite similar in chronology to that induced by anoxia of the marrow cells. Such effect is ascribed to inhibition by cobalt of oxygenation of the marrow. Inhibition in turn is due to formation of partially reversible complexes between cysteine and/or histidine, oxygen and cobalt[3]. Such complexes are difficult of dissociation in the body and probably create anoxia of the marrow erythroid cells and resultant erythropoiesis.

These early observations inspired a series of efforts to correct anemias in man by the administration of cobalt salts, usually cobaltous chloride or nitrate. These salts were shown to affect favorable anemia produced by benzol administration[4], sterile inflammation[5], infection[6], dysnutrition[7], thalassemia, sicklemia[8], hypoplastic anemia[9], etc.

In both the anemic and non-anemic individual, cobalt, when administered in doses of 50 to 300 milligrams daily, regularly gives good reticulocytic response in four to 10 days. This is, of course, about the same time interval as that seen in therapy by liver extract, in therapy by iron salts, anoxia and hemorrhage.

This chronologic similarity of reticulocytic response supports the concept that cobalt interferes with the transport of oxygen in the erythroid cells because of its ability to form oxygen-binding complexes with cysteine and/or histidine, rather than that cobalt is a specific nutritional element required for erythrocyte or hemoglobin production, even though, as a trace element, it is part of the B-12 complex.

Not a great deal is known about the fate of orally ingested cobalt salts. Most cobalt it lost in the feces. Only about eight per cent is excreted by the kidney.

Toxicities observed as a result of standard doses of the drug have heretofore been relatively mild. They have consisted of gastrointestinal symptoms such as anorexia, nausea, vomiting, and diarrhea; vasomotor symptoms such as flushing of the face or extremities and substernal pain[9]; and phenomena of the auditory nerves consisting of tinnitus and nerve deafness[10]. All are transient and reversible on discontinuance of the drug, although Berk, et al, have suggested that since the fundamental function of cobalt salts is interference with intracellular respiration.

such salts should be given cautiously to patients with myocardial infarction[9].

Recently, it has been discovered that many individuals undergoing several months of cobalt therapy will develop goiters[11]. Clinically, there is symmetric, firm and painless enlargement of the entire gland. Histologically, the follicles are large and the lining epithelium very hypertrophic; colloid is quite scanty.

Experimental work in human volunteers has shown that prolonged cobalt therapy may be associated with development of goiters with marked suppression of thyroid function as measured by determinations of radioactive iodine uptake and serum protein-bound iodine[11]. These goiters and their accompanying clinical and laboratory manifestations usually disappear within a month after discontinuance of cobalt.

Case Report

D.J.M. was born on June 20, 1953, at seven months' gestation. His birth weight was three pounds, 14 ounces. He was given the usual supportive measures for the premature, including oxygen and incubation for two weeks, and was discharged from the hospital on his 32nd day of life at a weight of five pounds. His red blood count on June 30, 1953, was 5.07 million with 14 grams of hemoglobin. He was last seen in this clinic on July 30, 1953. At this time complete examination, including ophthalomologic consultation, failed to reveal any pathological condition. His gain in weight had been normal since his discharge from the hospital, and he returned to the care of his family physician. He was not again seen until February 23, 1955, when consultation by his physician was requested because of a diffuse enlargement of the thyroid gland of three weeks' duration. At that time, his weight was 20 pounds, four ounces, his height was 29 3/4 inches, and his temperature was 100° rectally. The interim history revealed frequent upper respiratory infections and an anemia which had been treated with an "iron preparation" for four months. The developmental history was normal, and the immunologic and past history were negative. An interesting bit of family history was that the father's mother and two sisters all had had goiters.

Physical examination showed a diffuse, painless enlargement, moderately hard, of the entire thyroid gland. One examiner heard a briut over this area. No clinical evidence of thyroid hypofunction was adduced. The liver was three finger breadths below the right costal margin and was not tender. The urinalysis on admission was negative. The hemogram on admission showed a WBC of 12,400 with 34 per cent filamented neutrophils, two per cent nonfilamented neutrophils, 62 per cent lymphocytes and two per cent monocytes. The red blood count was 7.01 million with nine grams of hemoglobin (58 per cent). The red cells revealed microcytosis, hypochromasia, anisocytosis and poikilocytosis. The reticulocyte count was two per cent.

X-ray of the chest and neck showed only a soft mass of tissue in the anterior neck which did not extend into the bony thorax and in which no calcifications were seen.

The patient was seen in consultation by two members of the surgical staff who felt that (a) the mass was the thyroid, and (b) a specimen be taken for biopsy.

Since there was doubt as to the origin of the struma, the child was discharged without complete diagnosis and with the object in mind of considering studies of thyroid function such as cholesterol, protein-bound iodine, or radioactive iodine uptake later. Meanwhile, perusal of the literature revealed that in some individuals cobalt is thought to be a goitrogen. The "iron preparation" turned out to be one which contains 40 mgs. of cobalt chloride per 0.6 cc. This child had had 80 mgs. per day of cobalt chloride for four months. When seen two weeks after cobalt therapy was terminated, the thyroid was much smaller and softer. No other change in management had been made.

Discussion

Several groups of drugs are known to produce goiters and to depress thyroid function. Among them, the most familiar are the thiourea derivatives, thiocyanates and sulfaguanadine. All of these drugs reduce hor-

mone output of the thyroid, either because there is blockage of some stage of hormone synthesis or because the presence of these drugs removes an essential ingredient necessary for such synthesis. Since with the fall in circulating thyroid hormone, the anterior pituitary output of thyrotropic hormone increases, hyperplasia of the thyroid gland results.

Unlike thiourea deriviatives, prolonged courses of cobalt have failed to produce either goiter or evidence of thyroid dysfunction in experimental animals. In man, cobalt is thought to increase thyrotropic hormone, since after withdrawal of cobalt, the radioactive iodine rises to very high levels.

In the human being, the antithyroid effect of cobalt is thought to be due to its action of inhibition on some of the enzymatic reactions of the thyroid, probably that of tyrosine-iodinase, which catalyzes the iodination of tyrosine to monoiodotyrosine. This is the basic reaction by which inorganic iodine becomes protein-bound and is then available to conversion to thyroxin. Cobalt may act as an antienzyme in itself or may compete with tyrosine iodinase for the iodine of the substrate[11].

One group of investigators has found that cobalt fails to maintain its initially good hematopoietic response and has therorized that such failure may be due to (1) superimposition of the anemia of hypothyroidism. or (2) some toxic reaction of the drug on bone marrow which is operative only under prolonged therapy[12].

In summary, then, it is felt that cobalt therapy in children has some real elements of danger and should be employed only with full realization of the potentialities of toxicity inherent in the drug. That the described reaction may be due to individual idiocyncrasy cannot be gainsaid; decision on this point must await elucidation of further statistical studies.

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Medical Television News

Five regularly scheduled medical television programs have been announced for the 1955-56 season by national TV networks. Medical programs include:

MEDIC. 8:00 p.m. three Mondays out of four. Carried on WKY-TV, Oklahoma, and KVOO-TV, Tulsa.

MARCH OF MEDICINE. 8:30 p.m. the first Tuesday of November and December. Carried on NBC-TV network. December program will cover scientific presentations made at the A.M.A.'s Clinical Session in Boston. November program was not available at press time.

DOCTOR SPOCK. 2:00 p.m. Sundays on NBC-TV, a half hour telecast on child care and development.

MEDICAL AND HEALTH NEWS WITH HOWARD WHITMAN. Each Wednesday morning on NBC-TV's "Home" show, 10 minutes of the latest medical and health news will be reported.

MEDICAL HORIZONS. 8:30 p.m. each Monday over the ABC-TV network, the series will offer reports via "live" remote pickup from medical schools and research institutes.

DOCTOR HUDSON'S SECRET JOURNAL and IT'S FUN TO REDUCE will be available this fall for "spot" placement on local stations.

Scientific Articles

Management of OVARIAN TUMORS

JOHN PARKS, M.D.

Well protected in the lower recesses of the pelvic abdominal cavity reside two small, oval organs of internal secretion. These are the ovaries, highly important physical possessions of women. The ovaries are the most important organs contributing to secondary sex differentiation and they are absolutely essential to the reproductive function of womankind.

Embryologically and anatomically the ovaries are organs of descent. Having their origin in the renal region, they descend into the pelvic cavity carrying their blood and nerve supply with them. Unlike their male gonadal counterpart, the ovaries remain within the body cavity suspended between the walls of the pelvis and the uterus on highly vascular ligaments. Because the ovaries cannot be seen and because they can undergo considerable enlargement without discomfort, it is usually difficult to make an early diagnosis of an ovarian tumor.

The ovaries contain a variety of tissues the most important being the ovum itself. It is interesting that the ovum is the only unicellular structure in the human body which can be seen without the aid of magnification. The many pathologic potentialities of ovarian tissues and the great importance of ovarian function to the well being of the individual woman often combine to create considerable concern regarding treatment of a particular tumor.

Presented at the Sixty-Second Annual Meeting of the Oklahoma State Medical Association, May 9, 1955.

THE AUTHORS

John Parks, M.D. is Chairman of the Department of Obstetrics and Gynecology at George Washington University School of Medicine, Washington, D. C. He received his medical degree from the University of Wisconsin and did his intern and resident training at Gallinger Municipal Hospital, Madison, Wisconsin.

Symptoms

Quite often an ovarian tumor is an unexpected finding in the course of a complete physical examination. In many instances the size of the tumor and the pressure which it produces are the first indications of ovarian growth. When a tumor grows outward into the abdominal cavity the symptoms are usually more delayed than when the tumor spreads into the base of the broad ligament. Some tumors, particularly fibroma, pseudomucinous cystadenoma and cystadenocarcinoma of the ovary, may be accompanied by a considerable amout of ascitic fluid. An enlarging waist line due to tumor growth and ascites may be the first symptoms noticed by the patient. Dyspnea due to ascites and occasionally to hydrothorax may become a prominent symptom in patients with ovarian fibroma or carcinoma.

Acute pain of ovarian origin is usually associated with a twisted pedicle and radiates upward toward the kidney. Hemorrhage into an ovary can cause pain. Chronic and persistent pain brought about by ovarian pathology is usually the result of invasion of the peritoneum or pressure on an associated viscus.

Unfortunately the early development of a carcinoma of the ovary is frequently silent. Family history of cancer of the ovary should alert the physician of the potentialities of the same type of tumor occurring in mother or sisters.

Only a few of the ovarian tumors cause real endocrine changes. The rather infrequent masculinizing tumors produce amenorrhea. Certain tumors such as those of the theca and granulosa cell types may give rise to precocious puberty, abnormalities of menstrual function, or postmenopausal bleeding. Follicular polycystic ovaries may be associated with episodes of anovulatory bleeding and with infertility.

Physical Findings

An ovarian tumor is usually outlined by abdominal vaginal palpation or by abdominal rectovaginal examination. Tumors which have extended into the abdominal cavity can be felt best by gentle abdominal palpation. Fluid containing tumors have been differentiated from ascites due to other causes. An unfixed fluid containing tumor usually rests beneath the abdominal wall giving a dull note to percussion. On the other hand, fluid in the abdomen will float the intestines up giving an area of tympany about the umbilicus. A fluid wave may be demonstrated with a cystic ovarian tumor and with ascites. However, in addition to a widespread fluid wave, ascites can be demonstrated by shifting dullness noted when turning the patient from side to side.

In modern therapeutics there is a widespread tendency to attempt to aspirate the contents of fluid containing cavities with a needle. If an ovarian tumor is suspected, abdominal paracentesis should not be undertaken. Such a procedure often causes rupture of the all important capsule surrounding the tumor growth. In addition, the release of fluid from an ovarian cyst distorts the structure of the tumor adding confusion rather than clarity to the diagnosis.

When there is any question about the diagnosis of a pelvic tumor, it is essential that the bowel and bladder be evacuated completely. If there is still some question about pelvic findings the patient should come back for repeat examination. If she has not been traumatized by a first examination, she will be more relaxed on a second visit. Occasionally it is necessary to have the aid of anesthesia in outlining a pelvic tumor.

Colpotomy and culdoscopy are direct means of feeling or seeing small ovarian tumors. These procedures should not be carried out in the presence of a large tumor occupying the pelvic cavity.

Pelvic abdominal x-ray plates may show displacement of the viscera and in some dermoid tumors teeth or bone may be demonstrated.

Differential Diagnosis

A full bladder, a distended cecum or contents of the lower bowel may be confused with an ovarian tumor. In addition to the normal contents of these structures, adrenal, bowel, or bladder tumors, and intussusception all may give symptoms and signs suggestive of an ovarian tumor. These structures should be carefully evaluated prior to any surgical exploration for an ovarian tumor.

If there is any suspicion whatsoever that a tumor in or approaching the pelvis is an ectopic kidney, x-ray studies prior to laparotomy should be obtained. Ectopic kidneys, presacral tumors, and diverticulitis are more closely applied to the wall of the pelvis than is the situation with the majority of ovarian tumors.

Early intrauterine pregnancy particularly with uterine asymmetry, fusion defects of the uterus, corpus lutein cysts associated with normal pregnancy and with hydatid mole, non pelvic induced ascites, and tuberculous peritonitis are conditions sometimes confused with ovarian tumor pathology. These require careful differential diagnosis without surgery.

Fibromyomata, hydrosalpinx, paraovarian tumors, and ectopic pregnancy are all constant considerations in the differential diagnosis of ovarian tumors. In these, if the symptoms are such that operation is indicated, the differential diagnosis is not of great significance. On the other hand, observing a multinodular pelvic tumor over a

period of months with the impression that the patient has an uterine myoma when in reality she has an ovarian carcinoma may prove to be disastrous.

Indications for Abdominal Pelvic Exploration

Certain signs and symptoms associated with ovarian tumors require abdominal exploration.

1. First and foremost is pain. The most frequent cause of acute pain is some interference with the nerve and blood supply. Torsion of the infundibulopelvic ligament causes obliteration of the vein followed by edema, swelling of an ovarian tumor, thrombosis of the vein, obliteration of the artery, hemorrhage and gangrene. Rapid progressive enlargement of an ovarian tumor associated with acute pain is a rather strong indication of torsion of the pedicle.

2. Persistent and definite enlargement of an ovarian tumor or cyst above 6 cm. in diameter is an indication for exploration.

3. Rapid growth of an ovarian tumor is indication for exploration.

4. Ovarian enlargement in a woman past the menopause requires very careful consideration. If persistent, such ovarian enlargement is often due to malignancy.

5. A distinct adnexal tumor associated with precocious puberty requires exploration. These are usually granulosa cell tumors.

6. Ovarian enlargement plus unexplained uterine bleeding require uterine curettage and pelvic exploration.

7. As a general rule the surgeon should be more inclined to explore a solid than a cystic tumor of similar size.

8. An adnexal tumor with associated hydrothorax requires abdominal exploration, in addition to microscopic study of the centrifuged cellular content of the thoracic fluid.

9. A dermoid tumor demonstrated by x-ray (particularly in the presence of enlargement to a diameter of 5 cm. or more in size) requires exploration.

10. An ovarian tumor with associated amenorrhea, infertility or progressive change in menstrual function requires surgical exploration.

Gross Pathology

In the majority of operating rooms the decision regarding what procedure is to be carried out depends upon interpretation of gross anatomic and pathologic findings. A pathologist who can adequately interpret frozen sections is usually not readily available. Even with the most expert of pathologists frozen sections on soft ovarian tumors may not be entirely satisfactory.

In demonstrating the following series of ovarian tumors, particular emphasis will be placed on the characteristics of the capsule, the consistency of the tumor, the blood supply to the ovary, and the invasion or attachment of the tumor to adjacent structures. In the last analysis the operating physician has the responsibility of removing, to the best of his ability, pathologic tumor tissue and preserving physiologic ovarian function.

Principles in Surgery of the Ovaries

There are certain surgical principles which particularly pertain to the management of ovarian tumors.

1. One of the most important features of pelvic abdominal surgery is adequate exposure. If the tumor is large, the incision should be larger. Adequate internal palpation of the upper abdomen and careful visualization of both tubes and ovaries should be done before any removal of pelvic organs is attempted. Palpation of the liver may indicate the presence of perihepatic adhesions which resulted from peritonitis secondary to salpingitis or the presence of metastatic tumors. Palpation of the kidneys may prevent the unnecessary exposure and possible removal of a pelvic kidney. Palpation of the omentum and intestines may reveal original or metastatic lesions unsuspected prior to laparotomy.

2. As a general rule, all normal ovarian tissue should be preserved and all pathologic ovarian tissue should be removed. Success

in fulfilling this principle requires considerable experience as well as good judgment.

3. It is impossible to aspirate an ovarian tumor without some spillage into the peritoneal cavity. Encapsulation is the patient's best protection against the growing or irritating contents of the tumor. After the tumor is removed, it should be opened away from the operating field preferably by an assistant.

4. If the ovarian pedicle is twisted and contains a venous thrombus the infundibulopelvic ligament should be clamped or ligated above the area of the thrombosis. Untwisting the ovarian pedicle before clamping or ligating above the thrombus may dislodge an embolus and cause sudden death.

5. The infundibulopelvic ligament has its origin in the renal region. When it is incised the proximal portion will retract upward. Since this ligament has no suspensory function following removal of the ovary, it should not be brought down to the cervical stump or vaginal cuff. Undue stretch on the infundibulopelvic ligament will cause pain. If tension is placed on the ligament it will retract and may remove the ligating sutures from around the ovarian vessels, resulting in delayed intra-abdominal hemorrhage.

6. When a tumor is resected from the ovary the incision should be in the normal appearing ovarian tissue around the tumor to prevent spillage. There is no indication or justification for removing lutein cysts. Even large cysts associated with hydatid mole will undergo involution provided the blood supply is not compromised by torsion of the ligament.

7. Because of their intraligamentous origin parovarian cysts often distort the tube and ureter. By careful dissection these tumors can usually be shelled out of their cavity without sacrificing the tube and without injuring the ureter.

8. If both ovaries are removed for any reason the uterus should also be removed. Under reasonable surgical circumstances leaving such a functionless uterus only prolongs the period of potential pelvic pathology. The possible development of uterine malignancy remains as a threat. Estrogen treatment of the castrated woman is complicated and confused by bleeding from the uterus.

9. When the uterus has to be removed from a woman past 45 or 50 years of age, there are differences of opinion regarding removal of the ovaries as well. Many physicians subscribe to the belief that ovaries which appear perfectly normal and which seem to be functioning should be left undisturbed at any age. On the other hand if the uterus is removed for any reason in a woman past her fiftieth year and the ovaries appear abnormal in any way it seems justifiable to remove them along with the tubes and uterus.

10. In the presence of cancer of the ovary wide excision of all malignant tissue, removal of the omentum, and regional lymphadenectomy should be carried out. One of the most disturbing situations for the surgeon occurs when he receives an unanticipated but confirmed postoperative pathology report of ovarian malignancy. If the patient is in her teens or early twenties, if the tumor was completely encapsulated, and if the other ovary appeared normal, periodic examination at two to three month intervals seems indicated. On the other hand if there is reasonable doubt about the tumor not being completely confined, if she has had children, or if she is 30 or more years of age, certainly the safest procedure is for the surgeon to proceed immediately to remove the remaining tube, ovary and uterus.

For the patient whose ovarian cancer has spread beyond the confines of the capsule and cannot be removed entirely, therapeutic measures are limited. X-ray therapy has proved to be of little value. The intraperitoneal application of radioactive gold tends to reduce ascites, but has very limited inhibiting effect on tumor growth. Quite recently, in cooperation with Dr. Jeane Bateman, we have been applying thio-TEPA, one of the nitrogen mustard group, directly into the inoperable areas of tumor growth, followed by the intravenous or intramuscular administration of this agent. To date the results of thio-TEPA have been encouraging, but our observations of this drug for inoperable ovarian carcinoma are still of less than a year's duration.

"*Am* I MY *Brother's* KEEPER"

HAROLD L. BEDDOE, M.D.

It will come as no surprise to you, I am sure, that my subject tonight is murder.

During the week I have dealt with the practical aspects of murder as it relates to us in our daily work. You have been shown how and why the proper investigation of certain deaths must depend on the coordinated efforts of the police officer and the medical investigator.

All practical work, however, has its philosophical counterpart of which the serious student and practitioner must be aware. The philosophy of murder is not generally taught to homicide investigators but I believe that they must be acquainted with it and its role in this, the most fascinating of crimes.

So, with an appropriate captive audience before me tonight, I will indulge in a brief discourse on the philosophical side of murder, its relationship to society, and to those of us who have chosen to inquire into this most ancient of recorded crimes.

We must search no further than the Book of Genesis to find the earliest recorded murder. And it is in Genesis also that we find posed the question which perplexes society yet—"Am I my brother's keeper?"

Genesis provides us in addition with the first evidence of the mysticism with which society regards murder today—"And the Lord set a mark upon Cain."

The preoccupation of society with murder is evident everywhere about us. The newspapers drip with huge black headlines relating the most lurid details of a murder; the murder mysteries multiply daily in the racks of what once were drug-stores; the radio and television fill our homes with murder and misery throughout the day.

Of the 200 requests our office receives each year to speak to various professional and other organizations, the topic most often requested is murder.

THE AUTHOR

Harold L. Beddoe, M.D. is Assistant Chief Medical Examiner of the Commonwealth of Virginia. Before going to Virginia four years ago, he served as police physician for the city of Tulsa. He received his medical degree from Tulane University of Louisiana.

There is a cryptic quality about murder that intrigues everyone. Clarence Darrow once said, "Most men have not killed anybody, but they have read obituaries with pleasure."

Murder has been the subject of study by philosophers and poets, psychiatrists and theologians, sociologists and psychologists—all have found the cause and solution of murder in accordance with their own subjective beliefs.

Psychiatrists tell us that the impulse to kill occurs in many forms and disguises. The dreams, fantasies and neurotic symptoms of their patients often reflect a suppressed desire to destroy. Most of these desires, however, are harmless from the point of view of any danger of their execution.

Just as the neurotic individual represses the unpleasant guilty feelings aroused by his infantile death wishes, so we find society repressing its own social responsibility to the victims of murder. The physical act of murder is dissected free from its psychological and sociological roots which have nurtured it to fruition, and it is displayed before the public eye as a reprehensible, amoral, sadistic or insane act.

A great clamor is heard for the apprehension and prosecution of the perpetrator. Money is no object in preparing the case for trial. (I venture to say that none of you have heard any public protest about the expense to the people of any trial.) Then, after the festive trial by a jury of his peers,

Adapted from the banquet address given before the members of the annual Southwestern Homicide Investigators Seminar, Norman, Oklahoma, May 18, 1955.

"The hungry judges soon the sentence sign,
And wretches hang that jurymen may dine."

Revulsion and revenge might well be given as the epitome of murder.

The student of murder will, in time, come to inquire of himself, "What about this interest of society in murder? Is it a real concern born of true solicitude for the individual victims of murder? Or is it a rationalization of society's own morbid sense of guilt in allowing such acts to occur?"

If society is genuinely interested in casting off this ancient curse of humanity it would be reasonable to find that aggressive measures have been taken to that end. Let us examine the facts.

In 1953 there were approximately 1,750 deaths in the United States due to acute poliomyelitis. In that year, and in many preceding years, you and I contributed to funds for research designed to eliminate this killer of humanity.

In that same year there were over 7,000 recorded murders and over 16,000 recorded suicides in the United States yet how much did you contribute to a fund designed to study murder, or suicide, or accidents? Where are the research organizations devoted to a study of the causes and cures of these acts which result in over 10 times the number of deaths due to infantile paralysis?

What do you think would be the public reaction to the suggestion that an amount of money be given to the family of a murder victim equal to that spent on the trial of the murderer?

Further evidence of this morbid interest of society in the act of murder and the murderer rather than in the victim is readily seen here in Oklahoma. What is the name of the bill in the Legislature which would create a medico-legal system for the investigation of certain deaths within the State? The Nannie Doss Bill! Who remembers the name of the victim of Loeb and Leopold and many other murders where the case is referred to by the name of the murderer and not the victim?

The archaic office of coroner which originated in England has been perpetuated in this country. The apathy of society for the victims of murder is only too well demonstrated by society's continued sanction of this office. If you should become ill tonight you would be treated, no doubt, with the latest of miracle drugs whose development entailed years of research and the expenditure of many thousands of dollars, your hospitalization insurance would entitle you to a room in the most modern of hospitals equipped with comforts and scientific facilities undreamed of 20 years ago, and your physician would have had the best medical training available in the world.

But if you should be found dead in the street, or if you should be murdered, your death would be investigated under laws and procedures over five centuries old! And, just in case you had forgotten, there is no elected coroner, as such, in Oklahoma. The office was mentioned in the state Constitution, but the first legislature forgot to allow for his election, term of office, pay and duties. As a consequence, the local justices of the peace have been charged with the duty of investigating suspicious deaths in Oklahoma.

There is a bright side to this picture, however which I am happy to point out. That ray of hope is furnished by the adoption in some states of a system creating a medico-legal officer whose function it is to provide a medical determination of the cause and manner of death in a great variety of cases, the vast majority of which are not associated with violence.

Until society accepts its full responsibility to undertake an adequate study of all types of preventable deaths, I believe the medical examiner system to be the best practical method to protect the interests of both society and the decedent's family.

The State must provide a system for inquiring into deaths of workmen to determine, on purely medical grounds, whether the death arose out of and during the course of employment. A medical determination of this question by a disinterested medico-legal officer would provide a more accurate solution of such deaths than the method generally employed at present wherein the trend is to interpret the Workmen's Compensation laws as insurers of the employee beyond all reason.

The same medico-legal investigation should be required in all deaths resulting from accidents. A medical determination of the cause and manner of death would provide evidence for the proper settlement of claims in such deaths. The funds of the policyholders held in trust by the insurance companies would be protected against unjust awards. Likewise, those claims found valid by the medical evidence could be paid without costly court action.

Menaces to the public health, as well as industrial occupational hazards can be quickly detected by a system which provides for investigation of sudden, unexpected or unexplained deaths where no criminal act is suspected. Deaths occurring where there has been no physician in attendance are also subject to investigation by the medical examiner.

Such a medico-legal officer would also investigate all suicides and homicides. He would apply to the investigation all the latest medical and scientific techniques available to him in order to arrive at the cause and manner of death on medical grounds.

One important and significant advantage in having such a trained medico-legal officer is that not only are the obvious accidents, suicides and murders investigated but, because of the larger number of deaths he inquires into, the chances are greater for discovering an unsuspected murder.

We are often asked to compare the number of unsuspected murders occurring in a State without a medical examiner system with the number of such murders in a State having such a system.

I know of no accurate or reliable method to determine how many unsuspected murders occur in other States. There are too many variable factors involved to allow for anything but pure speculation.

But I can say this—in Virginia, with a State-wide medical examiner system, with 257 medical examiners inquiring into one out of every five deaths that occur, with trained pathologists doing careful medico-legal autopsies, with skilled toxicologists to study the organs for poisons, we discover two or three previously unsuspected murders each year.

I believe it is not unreasonable to assume, then, that in States where such a system is not in effect that there must be a good many more such murders.

A fair summary of my remarks this evening might be put this way. Society is failing in its obligation to the victims of murder and other preventable deaths. Until this obligation is assumed, however, there is something that can be done. A system of medico-legal inquiry into certain deaths can be established in a State that, when properly administered, will cost about four or five cents per capita population.

The concept of this system is foreign to the ancient coroner whose jurisdiction was based on the probability or possibility of foul play.

The medical examiner system will reach its full maturity in society when this concept of its primary function is realized—that a thorough investigation of the cause and manner of death is, within the limitations of our present scientific knowledge, the right of every decedent, the necessity of the public and the duty of the State.

DeBakey To Give Lecture

Michael E. DeBakey, M.D., Chairman of the Department of Surgery at the Baylor University College of Medicine, will present the first annual Alpha Omega Alpha Fall Lectureship at 8:00 p.m., November 4, 1955, at the Medical School Auditorium in Oklahoma City. His subject will be "Dissecting Aneurysms of the Aorta," and he will also show a color movie. All members of the State Medical Association are invited to attend, according to Floyd L. Miller, M.D., President of the Oklahoma Chapter.

The Past, Present and FUTURE *of* GENERAL PRACTICE

W. B. HILDEBRAND, M.D.

THE AUTHOR

W. B. Hildebrand, M.D., Menasha, Wisconsin, was President of the American Academy of General Practice at the time he presented this article at the annual meeting of the Oklahoma Academy of General Practice.

Doctors of medicine are members of a distinguished segment of the world's people. Out of some 160,000 physicians practicing private medicine in the United States today, over 100,000 are family doctors. The general practitioner of medicine constitutes less than one tenth of one per cent of the nation's population. No other profession in the 99.9 per cent of the remaining population requires as long nor as intensive an education as does the practice of medicine. Likewise no other profession assumes as high a moral obligation and responsibility towards its fellow men as does the medical profession.

Obtaining this distinction requires the expenditure of a great amount of time, money, and effort. Once achieved, because of the price paid, many individuals who have had the good fortune to experience this lot in life, succumb to the malignancy of complacency about their obligation to society at large, to themselves, and to the fellow members of their profession. Physicians, probably because they are fundamentally individualistic by nature, tend to sink into their own limited work-a-day world, surrounded by an aura, which in their own minds, sets them aloof from their community and they become a law unto themselves.

Such an attitude on the part of the average doctor to remain aloof from civic responsibility, along with three other factors, first the oft-denied but definitely present social revolution that has taken place in the last 25 years of the world's history, secondly the very rapid increase in scientific knowledge producing specialization in all fields of human endeavor, and thirdly, two World Wars occurring in a quarter of a century, have presented the medical profession in America with some very perplexing, confusing, and to a large extent unsolved problems. I propose to discuss some of these problems. They are not necessarily scientific ones but might be classified as medico-economic ones, inasmuch as they all pertain to the present social and economic status of the doctor in the highly complex, difficult manner of living that we call western civilization.

Because of the fact that the problems of the family doctor are among the most important and pressing, I shall concentrate on those first and discuss later, questions involving the entire medical profession.

What are these problems?

I. *The present status and future of the general physician in the complex matrix of American Medicine.*

a. His Education
b. His Hospital Problems
c. His Recent Adverse Publicity
d. His Future

II. *Those problems affecting all physicians, including,*

a. The Veterans Administration Program.
b. The Bricker Amendment, and its implications.
c. The practice of medicine by corporations.
d. Voluntary health insurance plans.

First, the general practitioner and his problems. We might ask ourselves the question: Is the general practitioner a dying member of the medical team? Will his work in the future be performed by teams of specialists as is now done under the health

insurance plan of New York City, Kaiser Permanente in California, or the Henry Ford Hospital in Detroit? Will the family doctor gradually fade away from the medical scene as we now know him, or is he on the ascendancy and is he regaining his place of former respect and esteem? I believe that evidence in favor of the latter is unmistakable. Through the American Academy of General Practice, the organization responsible for supporting the resurgency of the general practitioner, the family physician is not only regaining his previous position but surpassing it. May I present to you some facts.

A. *What about the education of the family doctor?*

The organization of the Academy in 1947 was unquestionably the inevitable result of the clash of two forces being exerted in opposite directions on the medical scene. They were:

1. The increasing demand by the public for a greater number of well-trained family physicians.

2. The inability of the medical profession to satisfy that demand because of lack of hospital facilities for many general practitioners, and the fact that medical school teaching was departmentalized to such an extent that undergraduate teaching was psychologically tuned to specialization.

In order to obtain factual information, two study groups were set up by the Academy after its organization. They were:

1. The Commission on Education.

2. The Commission on Hospitals.

After a prolonged study the Commission on Education reported the following:

1. There was little or no emphasis on preparation for the practice of general medicine in medical schools.

2. There was little emphasis on continuation courses of study for family doctors.

3. There was little interest on an undergraduate level in choosing general practice as a career. Only two out of 10 seniors out of a large survey were planning to enter general practice in 1948, the remainder going into specialties.

What has happened in the field of undergraduate and postgraduate education in seven years has changed and is currently changing the picture remarkably.

What is most important, the attitude of students is changing. Along with two other members of the American Academy of General Practice, I participated in a one hour panel discussion on general practice before the Student American Medical Association convention in Chicago in 1953. When we were through we were deluged with questions, such as how to choose a location, how to get on a hospital staff, how did we get along with specialists, did doctors really make night calls, does our malpractice insurance cost more than that of the specialist because your standards of practice are unquestionably lower than that of the specialist, etc. Their eagerness and genuine desire to learn more about general practice was characteristic of a new intense interest in general medicine among medical students. Ninety per cent of the seniors at Michigan University recently stated that they were seriously considering general practice as a life work. Six of 10 medical students throughout the country in a large survey made recently have signified their intention of entering general practice.

Such a resurgence of interest in general practice among medical students has thrown a tremendous responsibility on medical schools and educators. In many medical schools there is no adequate preparation for general practice, but the curricula is being currently altered to fit the need. For instance,

A. Bowman Gray School of Medicine of Duke University, Washington University, and Western Reserve University are changing the theory of their training with the thought in mind of implementing the undergraduate medical student to think about the economic, sociological, psychological, and environmental factors that determine whether or not medical care is qualitatively and quantitatively adequate.

B. Cornell and Pennsylvania have a new type of continuation clinic, in which the student follows the individual patient in his progress from clinic to clinic rather than working all day in one certain clinic on a certain specialty.

C. The University of Tennessee School of Medicine has a so-called "family doctor

clinic", in which the teaching is done by general practitioners.

D. Boston University includes a year of family study and one month of home calls in its senior year.

E. Pennsylvania assigns each freshman medical student to a family when he matriculates. If he is fortunate enough to remain during the next four years he follows the family as medical advisor until he graduates.

F. Twenty-one medical schools are now using the so-called preceptor plan of training by which each senior student is assigned to a general practitioner in the field for a specified time during which he lives and works with his preceptor in daily practice.

G. Fifty-four of 79 medical schools have embodied in their curricula, courses in integrated medicine, meaning the diagnosis and treatment of a *patient* who is ill rather than the diagnosis and treatment of *isolated diseases* in organs, tissues or cells. One of the most enlightening and heartening attitudes on the subject of integrated medicine to be found in the literature is seen in the November, 1953, volume of the *Medical Clinics of North America,* in an article entitled "The Physician, The Patient and Disease" by Doctor Isadore S. Ravdin, Barton, Professor of Surgery at the University of Pennsylvania College of Medicine. I quote, "The apathy of some clinicians disturbs me. There has been an extraordinary lag in the adoption of the concept of the complete care of the patient.

"When the age of specialization came it deprived the medical student of his view of the patient as a whole, and of medicine as a single discipline. He spent the first two years learning basic sciences in his laboratory where the patient was hardly more than a remote goal. When in his clinical years the patient finally came into view he was dismembered by the specialist into separate diseases for treatment in the hospital. The patient's continuing problems, whether organic or psychosomatic, and his continuing care over a period of months or years were hardly apparent to the medical student seeing him for a brief moment in a specialty ward or clinic. The patient had become a case as lifeless as the file that held his record." Doctor Ravdin continues, "For the past few years Deans and Faculties of several Universities have been trying to put the patient back together again, and it is hoped that this movement will be successful."

This attitude coming from an old tradition-bound medical school such as Pennsylvania is indeed heartening.

B. *Now what of postgraduate medical education?*

Because of the fact that 50 hours of study annually is a requirement for continued membership in the American Academy of General Practice, since 1947 postgraduate medical education has been riding the crest of a period of enthusiasm never before seen in this or any other country. During 1953, 66,000 physicians attended approximately 1,600 formal postgraduate courses offered throughout the United States. This is an increase of 20,000 doctors or 43 per cent over those who attended them in 1952. These figures are obtained from the Council on Medical Education and Hospitals of the American Medical Association.

It is the philosophy of the Academy that every general practitioner in the United States should be able to spend one hour per week in some type of postgraduate study, in the same spirit of financial sacrifice necessary if he were to attend a football game or go fishing or hunting. Physicians who practice in groups or who live near medical centers have no difficulty in satisfying this requirement. For the remote general practitioner in rural counties the problem is different, and many innovations in teaching aids have been devised for him.

First, in some states, traveling teams of four to six doctors stage one or two day clinics in various sections of the state. Michigan, Illinois, and Wisconsin are leaders in this type of education. Second, in Kentucky and Indiana over a state-wide telephone hookup a one to two hour medical program has been carried by private wire to county societies in outlying areas who listen in by the aid of amplifiers. As many as 400 doctors have been reached in one night at a cost of $2 per doctor. Third, the Ohio Academy of General Practice has a large library of medical lectures on phonograph records which are rented to groups in remote areas.

Fourth, a company in California is currently detailing a tape recorder and synchronized film projector and then renting out weekly tape recordings on timely medical subjects for a nominal sum to groups or individuals.

This cursory review would indicate that at the present time far greater emphasis is being placed on the general practitioner than ever before in educational circles.

Now with nearly 20,000 general practitioners fulfilling their annual postgraduate study requirements, and with increasing numbers of young, well trained graduates electing the field of general practice due probably to renewed emphasis on general practice in medical schools, and with hundreds of rural areas realizing the inestimable value of the family doctor in community life and providing modern facilities for the practice of medicine to attract and hold the young physician, the conclusion can only be drawn that the practice of modern general medicine is on the ascendency and is rapidly regaining the lost prestige of the 1930's and early 40's.

Let us now turn to the question of the general practitioner in his relationship to the modern hospital. We can provide the public with more adequately trained family doctors and give them educational opportunities that are unlimited but this does not solve the greatest problem that faced the general practitioner in 1947 when the Academy was organized and which remains the greatest problem, that of his relationship to and privileges in hospitals.

That group of general practitioners that studied the hospital problem in 1947 found the status of the family doctor in the majority of hospitals to be rapidly deteriorating. Many hospitals were denying privileges to him. Many new hospitals were being built and staff organizations were such that all doctors except those with Board certification were being excluded. If the general practitioner was to be given less and less responsibility as on the hospital staff, and have fewer and fewer privileges in his workshop his demise seemed certain. Such a situation, that of a threatened exclusion of the general practitioner from adequate hospital facilities, was the greatest threat to the then new American Academy of General Practice and still is a very potent one. However, many strides have been made and steps taken to correct this situation.

When the Commission on Hospitals, after its organization in 1947, had accumulated enough workable data, giving a panoramic picture of the problem throughout the country they published the first edition of a booklet called the "Manual of General Practice Departments in Hospitals."

As you doubtless know, this manual discussed the paradox of the crying need for more family doctors, and the ever increasing restrictions that were being placed on the privileges of general practitioners in hospitals throughout the country. The manual set up a blueprint for integrating the general practitioner into the hospital staff through the organization of "Departments of General Practice", which would in effect, allow the family doctor to properly care for the diagnostic and therapeutic needs of his patients.

At first the reception of such an innovation in staff organization was cool, however it was finally accepted and in 1952 when the Joint Commission on Accreditation assumed the responsibility for standards of medical care in hospitals based on the work pioneered by the American College of Surgeons, a section was added conforming to the principles of the Academy's Manual for the integration of general practice departments in hospitals. This was a great victory and long sought-for goal and its acceptance has resulted in the formation of general practice departments in nearly 50 per cent of the 4,700 odd general hospitals in the United States.

It is axiomatic that the standards of medical care in such communities served by these hospitals will be elevated because good medical care in any community cannot be provided without the physician having access to hospital facilities which are adequate.

Since hospital administrators and the medical profession now have a clear cut statement from the Joint Commission as to the organization and operation of the general practice department, there should be no question about accreditation as far as staff organization is concerned if privileges are granted to general practitioners under the principles outlined in the manual of the Academy.

The Joint Commission on Accreditation, to most of us, is cloaked in mystery and secrecy. It should not be. Its activities should be more widely publicized. It was organized in 1952 and it is composed of six members from the American Hospital Association, six from the American Medical Association two of which are general practitioners and members of the Academy, three from the American College of Surgeons, three from the American College of Physicians, one from the Canadian Medical Association, and one from the Canadian Hospital Association. The entire program is voluntary and not a police system. The sole purpose is to raise the quality of medical care delivered by American hospitals to the public. It has not been universally accepted. The State of Florida does not recognize it at all. The Commission has set up minimum standards for accrediting and these are principles not laws. The leading principles are that the staff shall be self-governed, self-educating, and self-analytical. It must define, control and be responsible for the medical activities of the hospital.

A point system has been set up, each functional department in the hospital being given a percentage rating, 100 being perfect. Seventy-five is necessary for complete and full accreditation, 60 to 75 means provisional accreditation, and less means failure of accreditation. There are eight common causes for failure to receive accreditation:

1. Fire hazards.
2. Fee splitting and unethical staff practices.
3. Evidence that non-medical practitioners are using the hospital.
4. Excessive removal of normal tissue and unnecessary surgery.
5. Lack of supervision of the clinical work done in a hospital.
6. Lack of a thorough review on a monthly basis of the clinical work done in the hospitals.
7. Lack of clinically recorded essential entries on the records to justify certain procedures being done.
8. High and unexplained morbidity and mortality rates, and a high Cesarean section rate.

Such causes for failure of accreditation illustrate the emphasis placed on the care of the patient by the Commission.

May I repeat and emphasize that the Joint Commission has approved the formation and function of a Department of General Practice into the hospital staff organization as recommended by the manual of the Academy of General Practice, and those recommendations include the stipulation that the members of the General Practice Department shall have the privileges of the clinical services of the other departments according to their demonstrated ability, skill, and judgment. No more clear-cut statement could be made.

Just because a man secures a license to practice medicine does not mean that he is competent in all fields of medical endeavor. The greatest problem in regard to extending privileges to general practitioners has been the demand by many of them for major surgical privileges. This problem can be solved. After a Department of General Practice has been formed in a hospital almost invariably the staff has granted such privileges to those found competent. Lack of a specialty certification does not mean that a man is not capable of performing many procedures falling under a specialist's classification.

One thing is certain, "with privilege comes responsibility". The future of the Family Doctor and the Academy rests not only on the ability of each general practitioner to stand for high quality and high standards of medical care, but to *show* and *demonstrate* to the public, the press, medical schools, hospital administrators, trustees, and our colleagues that he *does* stand for such high quality and standards.

The greatest progress will be made if no attempts are ever furthered to obtain for any physician, by pressure, friendship, or otherwise, hospital privileges that are not commensurate with his ability.

It is to be expected that many problems will arise in the process of improving medical care and in raising hospital standards. Also in the metamorphosis of hospital staff organization it is to be anticipated that some hospitals will be completely staffed with specialists, and some with only general practitioners on the staff, both completely inadadequate to meet the needs of the patient.

The completely adequate well-rounded hospital staff such as is provided for in the manual of the Academy incorporates both specialists and general practitioners. It is endorsed by the A.M.A., the Joint Commission, and the American College of Physicians and looks to be the logical answer not only to the problem of the general practitioner for hospital privilieges, but also to the need for better medical care.

Has the American Academy of General Practice in its seven short years of existence solved all of the problems of the family doctor? Certainly not. The present status of the family doctor can be compared to the problems of the present Republican Administration after a short time in office. When Congress adjourned in August, 1953, after its first session under Eisenhower, a reporter asked him how he felt about the work done. President Eisenhower replied: "I know of no official in the Administration so foolish as to believe that we who in January came to Washington have seen and conquered all the problems of the Nation. The future, both immediate and distant remains full of trials and hazards. The end of our staggering economic burden is not yet in sight. The end of the peril to peace is not nearly in view."

Applying these beautifully spoken words to general practice, certainly no officer of the American Academy of General Practice is foolish enough to believe that all the problems facing that branch of medicine have been conquered. However, by its own boot straps general practice is lifting itself up and back into its proper place in the medical economy. The family physician fills a need that only he is able to fill, and at all costs this need must be satisfied.

There is no other answer to the riddle of the future of general practice than to say that there have been unmistakable signs of a renaissance since the American Academy of General Practice appeared on the medical scene seven years ago. Renewed interest in general practice on an undergraduate level, the trend in post-graduate medical education to concentrate on the needs of the family physician, the fight for hospital privileges for qualified general practitioners, and the growing awareness shown by the consuming medical public of the need for the personal physician in community life all point towards smoother highways for the general practitioner in the years ahead.

In summarizing the first portion of these remarks, may I state that the American Academy of General Practice cannot alone be expected to attract, educate, and distribute young doctors of medicine in the field of general practice, nor can it alone provide facilities for continuing education or procure hospital staff appointments with individually appraised privileges for these young doctors. Such problems can only be solved by the entire medical profession working together. It is, however, encouraging and heartening to watch the ever widening vista of the programs of State Medical Societies, medical schools and the American Medical Association, all focused on the fulfillment of these vital ends.

Now, in the short time remaining let me rapidly cover three or four other pressing problems facing medicine today. The first of these problems is that of the medical care currently being given by the Veterans Administration. By means of an expanding system of free medical care for illness of any kind to veterans and their dependents, the tentacles of Socialized Medicine are slowly but inexorably encircling a people who do not want it. Forty per cent of our male population have already served in the Armed Forces, and thus become eligible to utilize the 120,000 beds in 169 hospitals built for veterans in this country. The Veterans Administration is currently treating 100,000 bed patients and countless out-patients per day, and of those the illnesses of 85 per cent have no connection whatsoever with military service.

As the present generation of veterans grows older, geriatic and domiciliary care will require more and more beds. The natural sympathy of a grateful people following World War II was responsible for the enthusiasm of this free medical care stampede, but it is now being nurtured by political lobbies who neither represent nor control the veteran's vote. These same groups are continuing to lobby for increased medical benefits for wives and children of veterans.

Certainly, we of the medical profession

have and always will endorse the principle of unlimited care for service connected illness and disabilities, as we endorse Federal care of neuropsychiatric and tuberculosis patients who are unable to pay. But, in the name of heaven why should we provide a lifetime of free medical service for illness of of any kind just because a citizen has spent some time in a military training camp?

Certainly, the time has come when we must have a clear-cut definition of our country's obligations to its veterans of the future. The American Medical Association is currently doing its best to educate and alert the members of the medical profession to an immediate need for the revision of the present policy of the Veterans Administration. If the present policy is not revised then surely Governmental control of medicine through the sprawling Veterans Administration system can only be a matter of time.

The philosophy of the Bricker Amendment and its implication upon the medical profession should certainly occupy some of our consideration these days. As you know, early in 1953 Senator Bricker of Ohio along with 63 other Congressional Co-Sponsors recommended by resolution the adoption of an amendment to our Constitution, which would limit the treaty making authority of the Executive Branch of the Federal Government and thus protect the lives and interests of our citizens and states. Treaties now made by our Executive Branch can become the supreme law of the land, if ratified by two-thirds of the Senate present and voting.

American medicine is vitally interested because of the existing United States "friendship treaties", and because of the covenant and contracts of the International Labor Organization sponsored by the United Nations, which if properly ratified could change our domestic laws. One of these so-called friendship treaties, called for and has resulted in an exchange of professional men between the United States and other participating foreign countries, regardless of the scientific standards of those countries or of the professional men. Had this treaty been ratified as originally written it would have overridden the requirements of many of our State licensing boards. In addition, the International Labor Organization adopted a covenant in 1952 known as "Minimum Standards of Social Security", packed with socialistic medical proposals, which if ratified by our Congress, would definitely and unquestionably establish Governmental control in medicine.

It might be well to point out here that in 1950 and '51 2,072 graduates of foreign medical schools were interning in approved hospitals in the United States. In 1951-52 the figure grew to 3,349; in 1952-53 it was 4,388 and in 1953-54 it was 5,589. Ninety per cent of these foreign graduates are non-English speaking. At the present time 64 per cent of the interns in approved hospitals in the state of New Jersey fall into this category. Only one of five of these foreigners from schools which, in many instances, are not approved by the Council on Medical Education and Hospitals passed the National Board of Medical Examiners examination after three to five years in our hospitals.

In many instances, these men are returning to their countries after having spent internships and residencies in this country and have immediately applied for re-entry into this country under the immigration quota. Many of them are gaining admission and setting up practice. This procedure, if allowed to continue and grow as statistically it appears to be doing, can only result in lowering the standards of medical care.

The Bricker Amendment was defeated, but the basic issue is not dead. As doctors, because of the dangers not only to our profession but to the welfare of our country in general, we must support other proposals made which will surely evolve in the future, that will effectively plug what appears to be a loophole in our Constitution.

Thirdly, let us consider the panel system of the practice of medicine. I refer here to such groups as the Health Insurance Plan of New York, Kaiser-Permanente, Henry Ford Hospital in Detroit, et cetera. Involved in such corporation practice are the principles of lack of freedom of choice of physician, the question of how efficient such panel practice is, control of medicine by non-professional personnel, et cetera. Such systems as these as is true with the Veterans Administration could be moved into Washington overnight and controlled by a national medical czar.

Whether such systems are here to stay and whether they will increase is unknown. I sincerely hope not. Three million people are currently covered under such systems. Health Insurance Plan of New York has moved 400,000 patients into 30 medical groups, served by 950 doctors.

Labor Unions have plans which are just as ambitious as the above named corporation. The San Francisco Labor Council, not a single union but 141 local American Federation of Labor unions with 187,000 members, and 300,000 dependents has recently approved a program which may have far-reaching effects on medical practice in cities the country over. The program would involve the construction of Labor Health Centers to cost up to $400,000 each, to provide comprehensive medical care of all types including home, office, and hospital, and all preventive services to all members and dependents, comprising over 50 per cent of the entire population of the City of San Francisco. The entire pineapple industry of the Territory of Hawaii has recently been organized into a group based on the health insurance plan of New York. In fact, the Medical Director of the Health Insurance Plan of New York was loaned to the group in Hawaii, in order that he might advise them on the mechanics of organization. The City of Milwaukee has recently begun a plan with one of its sponsors being Arthur Altmeyer, one of the old Social Security Crowd under Oscar Ewing of the Truman Administration days. Many other such plans are apparently underway throughout the entire country.

Every doctor in the United States must be alerted to the terrific impact on private practice and freedom of choice of physician that these plans entail, yes, even the threat of the complete extinction of the private practice of medicine as we now know it. If these plans are sound, they are bound to expand. If not, they will fall under the impact of their own mistakes. This problem over the next few years should bear the closest observation by all organized medical groups and every individual physician in this country.

The fourth and last problem is that associated with voluntary prepaid medical care plans. In this complex field of medical economics, the public and the medical profession are moving rapidly toward a crisis. More members of voluntary health plans are being hospitalized daily. In 1941 one in 10 was hospitalized, in 1953 one in seven. 91,000,000 people in this country now carry hospitalization insurance. 73,000,000 carry surgical insurance, 45,000,000 are insured in Blue Cross alone, 36,000,000 carry medical care insurance, 25,000,000 have Blue Shield coverage. All of this tremendous coverage has been achieved since 1940. Blue Cross enrollment is increasing at a rate of 5,000,000 per year, and commercial carriers are exceeding even that rate. The acceptance of the voluntary principle as applied to sickness insurance has been the most rapid and complete in the history of the institution of insurance in America.

However, those hospitalized under such plans are now being given more service and hospital costs are rising at the rate of one per cent per month. All this adds up to a growing utilization of health plans up to the limit of coverage by the patient, as well as improper and unnecessary utilization by the physician. On a single day in one well-known 185 bed hospital a study was made. Here is what was found. Twenty-five patients who were in the hospital and who had been there for more than two weeks were studied. Of those, 19 were covered under Blue Cross. Of those 19, 16 were ambulatory and could have been sent home. Five were in casts and were waiting for x-rays or cast changes to be done 10 days later. Three were diabetics well controlled. One was an 80 year old man who had been put in the hospital so his family could celebrate Christmas without him. Ten had orders that would allow them weekend leaves from the hospital. On the day that the Trustees made the results of the study known to the Staff, 15 patients were discharged out of the 25 under study.

These practices are not confined alone to that hospital. Similar studies show that they exist all over the country. It is a basic economic fact that the greater the utilization the greater the cost of premiums in any insurance plan. How far then can we go?

Therefore, the greater the abuse, the higher the premium, resulting in an endless process, which like previous problems discussed, can result only in Government control of medical care if such abuse is not

abolished. When the consuming public throws up its hands and says that it can no longer afford medical care under a voluntary system of health insurance, at that very moment the Federal Government will step in.

Doctors alone are not responsible for creating such a situation. Many factors are contributing to the abuse. The important point is that doctors alone can save it. By educating our colleagues to the grave danger, by working through County and State Societies, and hospital staffs, we can police our own ranks and get back to a sane, judicious use of voluntary health insurance. The institution of voluntary prepaid health plans unfettered by governent interference is the most potent road block in the pathway of Socialized Medicine. Let us preserve it at all costs.

Time is running out. I have not had time to discuss the problem of Osteopathy and Chiropractic, the over-all problem of medical education, Eisenhower's Health and Welfare Program, public relations in modern medicine, the lack of equitable physician distribution in this country, the problem of the care of the low income patient, the shortage of nurses, the financial problems of medical schools, et cetera. These are present and deserve our sound thinking and positive action.

It has not been my intention to present to you a dismal picture of the general practice of medicine in 1954. We may liken the practice of medicine to government under a democracy. As bad as a democracy can get at certain times, it is far better than any other form of government that has been devised to date. Likewise as pessimistic as we are about the present status and future of American medicine, it is by far the best system in the world, but here is the important thing—we can make it better. The challenge is present. No one of us can meet it alone, but our individual responsibility is crystal clear. Any doctor who fails in these trying times to participate in and foster medical activities on the level of his County Society or his constituent chapter of the American Academy of General Practice is derelict in his duties to himself and to his chosen profession. But in that participation each must bear a part of the burden of the responsibility. The pleasure derived from serving the medical profession by contributing to the high purposes of our calling far out-weighs the price paid in time, money, and effort. Through such service, problems can and will be solved.

I should like to thank each of you for the warm cordiality of your welcome to me today. It is deeply appreciated. In closing may I turn from the socio-economic aspect of medicine to the philosophical side, and leave with you a few words of inspiration from the pen of Scarlet as he wrote of the great Sir William Osler. He said, "As men of medicine, we must have respect for man, personal integrity, the virtue of work, the dignity of our profession, deep interest in the craft as a high adventure and an imaginative art, all crowded by Osler's more intimate prescribed qualities, the art of detachment, the virtue of method, the quality of thoroughness, and the grace of humility. These are the things which have given our calling its strength, and which have made it one of the activities of the human spirit which has brought man out of the original darkness."

For Patients Only!

An attractive new leaflet earmarked "for patients only" has been distributed to memberts of the AMA. Entitled "To All My Patients," this 12-page pamphlet (for physicians to distribute to their patients) explains the roles of various persons on the medical team in providing good medical care. In addition, the booklet briefly discusses medical and hospital fees and health insurance. Designed primarily to promote better doctor-patient relationships, the booklet also provides space for the doctor's name, address and office hours to be inserted at the end. Quantities will be available on request from the AMA Public Relations Department.

Association Activities

PRESIDENT'S LETTER

It was again your president's rare privilege to participate in a program honoring a physician who had served well his community for 51 years and who, according to the younger physicians, is "Ship Captain" still, healthwise, for not only the local area but for much of the surrounding country.

At Broken Arrow on September 21, it was an occasion sponsored by the Chamber of Commerce and participated in by laborers, merchants, lawyers, bankers, nurses, doctors and other vocations giving recognition to and showing reverential respect to Dr. Onis Franklin. This was an event in which the man, a public servant for 51 years was not without honor in his own home town. Such honors few people receive either at home or abroad.

On seeing Doctor Franklin, one would not surmise that he has been here much more than 51 years. On talking with him and trying to elicit some of the outstanding services rendered and contributions made to his community, one would have to conclude that he has been just the average community doctor. This is not so when the conversation comes from his Chamber of Commerce associates, his patients and his professional confreres. From these people, the services rendered, the contributions made and the deeds done sound contributions made and the deeds done sound like the truly American pioneer who has grown with progress.

This is an inadequate attempt to portray a word picture of a real servant of the people and a people who recognize and attempt to show appreciation of and pay tribute to a man they love, their family physician, Doctor Franklin.

R. D. Goodwin

President

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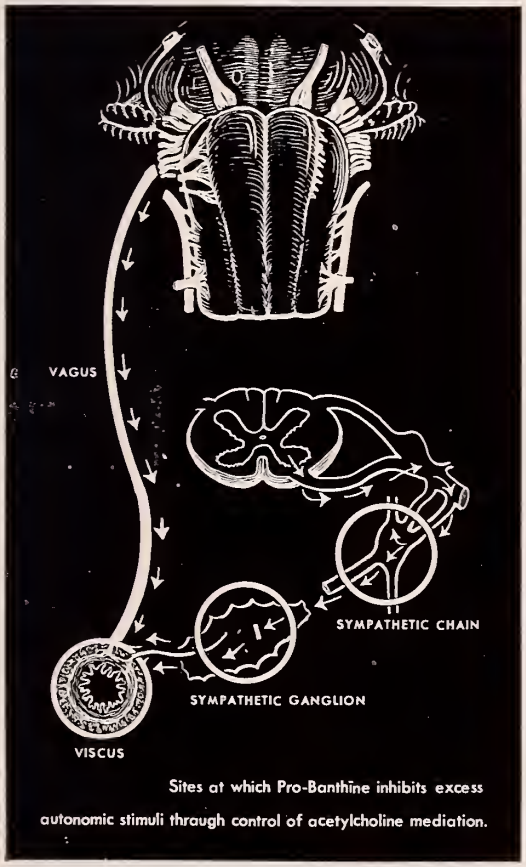
Pro-Banthīne consistently controls gastrointestinal hypermotility and spasm and the attendant symptoms.

Pro-Banthine is an improved anticholinergic compound. Its unique pharmacologic properties are a decided advance in the control of the most common symptoms of smooth muscle spasm in all segments of the gastrointestinal tract.

By controlling excess motility of the gastrointestinal tract, Pro-Banthine has found wide use[1] in the treatment of peptic ulcer, functional diarrheas, regional enteritis and ulcerative colitis. It is also valuable in the treatment of pylorospasm and spasm of the sphincter of Oddi.



Sites at which Pro-Banthīne inhibits excess autonomic stimuli through control of acetylcholine mediation.

Roback and Beal[2] found that Pro-Banthine orally was an "inhibitor of spontaneous and histamine-stimulated gastric secretion" which "resulted in marked and prolonged inhibition of the motility of the stomach, jejunum, and colon. . . ."

Therapy with Pro-Banthine is remarkably free from reactions associated with parasympathetic inhibition. Dryness of the mouth and blurred vision are much less common with Pro-Banthine than with other potent anticholinergic agents.

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Pro-Banthine (β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is available in three dosage forms: sugar-coated tablets of 15 mg.; sugar-coated tablets of 15 mg. of Pro-Banthine with 15 mg. of phenobarbital, for use when anxiety and tension are complicating factors; ampuls of 30 mg., for more rapid effects and in instances when oral medication is impractical or impossible.

For the average patient one tablet of Pro-Banthine (15 mg.) with each meal and two tablets (30 mg.) at bedtime will be adequate. G. D. Searle & Co., Research in the Service of Medicine.

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1. Schwartz I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: Gastroenterology *25*:416 (Nov.) 1953.

2. Roback, R. A., and Beal, J. M.: Gastroenterology *25*:24 (Sept.) 1953.

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Deaths

William A. Sanders, M.D.
1886-1955

William A. Sanders, M.D., Oklahoma physician for 40 years, died August 30 at his home in Antlers after a year's illness.

Doctor Sanders was born May 4, 1886, at Hampton, Ark. He was a member of the First Baptist Church.

O. E. Templin, M.D.
1870-1955

O. E. Templin, M.D., pioneer Oklahoma physician, died August 16 in a Tulsa convalescent home following an 18 month illness.

Doctor Templin was born in Chariton County, Iowa, and came to Oklahoma in 1900. He graduated from Vanderbilt University Medical School in 1904 and opened his first office in Okeene. He served in the Army Medical Corps during World War I. He practiced in Alva 46 years before retiring a year ago.

Doctor Templin was a member of the First Methodist Church, Rotary Club, American Legion, and Odd Fellows.

Charles William Richards, M.D.
1871-1955

Charles William Richards, M.D., Newkirk physician since 1910, died August 12 at his home.

Doctor Richards was born May 18, 1871 at Elizabeth, New Jersey. He graduated from Ohio Medical School and interned in Germany. He practiced in Kansas City for a short time and left there in 1902 when he moved to Kildare, later moving to Pawhuska where he practiced until 1910 when he moved to Newkirk. He served in the medical corps during World War I.

William Albert Thompson, M.D.
1874-1955

William Albert Thompson, M.D., Stigler physician from 1931 until his retirement in 1945, died August 11 after a month's illness.

Doctor Thompson was a veteran of three wars, the Spanish-American, the Philippine Insurrection and World War I.

Doctor Thompson was born in Greenville, Texas, and attended North Texas State College at Denton before receiving his medical degree from the University of Arkansas in 1906. At various times he served as physician for the Indian Service.

Two New Medical Buildings Opened in State Cities

Building and remodeling continues to progress over the state as physicians continually are constructing additional office and clinic space for better care of their patients. Two of the most recent buildings to be opened are the Wallingford-Lockard Radiological Office building in Bartlesville and the Medical Arts Building in Enid.

F. C. Wallingford, M.D. and V.M. Lockard, M.D., Bartlesville radiologists, constructed their building of pink brick with interior walls of mahogony paneling. Walls of the room containing X-ray equipment are lined with a layer of lead and all bulky controls for the equipment are installed in the basement.

The Enid Medical Arts Building contains the offices of Paul B. Champlin, M.D., James F. Tagge, M.D. and J. Wendall Mercer, M.D. and a prescription shop. Containing about 74,000 square feet of space, facilities include a clinical laboratory, a deep therapy room and light therapy room, library, nurses lounge, in addition to the physicians' examing rooms and consultation rooms.

Anesthesiologists Form Speakers' Bureau

The following announcement has been received from the Oklahoma Society of Anesthesiologists:

On some occasions in recent months some members of the Oklahoma Society of Anesthesiologists have been asked to speak to County Medical Society meetings on their specialty. This has caused some members of the society to believe that there may be other county organizations which would be interested in such discussions. Therefore, the president of the society has appointed a committee to serve as a "Speakers Bureau" for any organization that might wish to obtain their services.

Members of the Oklahoma Society of Anesthesiologists will be delighted to speak to either professional or lay groups if they are contacted by the organizations involved. Contact can be made by writing the secretary of the society, Grace Hassler, M.D., or the president, R. Gibson Parrish, M.D. through the *Journal.*

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Deltasone*

requires only 1/5 the dose of cortisone

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Southern Medical Association Will Meet in Houston

The Southern Medical Association, the nation's second largest general medical organization, will hold its 49th Annual Meeting in Houston, Texas, at the Shamrock Hotel on November 14-17, 1955. More than 3,000 of the Association's 10,000 members are expected to attend the four-day meeting.

The Scientific Assembly will feature some 300 papers by outstanding researchers and practitioners in all of the major medical and surgical fields.

In addition to the twenty Sections of the Association, several other major specialty groups will meet conjointly. Among those planning programs in Houston are: American College of Chest Physicians—Southern Chapter, Association for Research in Ophthalmology, Southern Gynecological and Obstetrical Society, Women Physicians, and the Southern Society of Cancer Cytology. More than 200 technical and scientific exhibits will be housed in the Exhibit Hall of The Shamrock.

The Association has a Housing Bureau, Box 1267, Houston, Texas, to which all requests for hotel accomodations should be addressed. A formal hotel reservation form appears in every current issue of the Southern Medical Journal and will also be attached to the Preliminary Program which will be mailed to 37,500 physicians in the South.

The official Post Convention Tour to Mexico City will leave Houston by air on Thursday afternoon for a 10-day tour of Mexico. The tour, arranged by the International Travel Service, Inc., of Chicago, will be personally escorted by Mr. Frank E. Smith, former Executive Director of the Blue Shield Commission. Tour information will be mailed to members and will appear in the Journal and Official Program.

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1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets
(PREDNISOLONE, MERCK)
2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

Indications: *Rheumatoid arthritis*
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Appropriate to an age of mental and emotional stress,
EQUANIL has demonstrated remarkable properties for promoting equanimity and release from tension,
without mental clouding.
EQUANIL is a pharmacologically unique anti-anxiety agent with muscle-relaxing features.
Acting specifically on the central nervous system,
it has a primary place in the
management of patients with anxiety neuroses,
tension states, and associated conditions.[1,2]
In clinical trials, patients respond with ". . . lessening of tension, reduced irritability and restlessness, more restful sleep, and generalized muscle relaxation."[2]
It is a valuable adjunct to psychotherapy.
Clinical use is not limited by significant side-effects, toxic manifestations, or withdrawal phenomena.[1,2]
Supplied: Tablets, 400 mg., bottles of 48.

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1. Selling, L.S.: J.A.M.A. 157: 1594 (April 30) 1955. 2. Borrus, J.C.: J.A.M.A. 157: 1596 (April 30) 1955.

A

ou probably know every answer!)

Which is today's most widely prescribed broad-spectrum antibiotic?

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What are some of the advantages of ACHROMYCIN?

A. Wide spectrum of effectiveness.
Rapid diffusion and penetration.
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Exactly how broad is the spectrum of ACHROMYCIN?

A. It has proved effective against a wide variety of infections, caused by Gram-positive and Gram-negative bacteria, rickettsia, and certain viruses and protozoa.

In what way are ACHROMYCIN Capsules advantageous?

A. For rapid and complete absorption they are dry-filled, sealed capsules (a Lederle exclusive!) No oils, no paste...tamperproof.

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A. It is produced — every gram — under rigid quality control in Lederle's own laboratories and is available only under the Lederle label.

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Book Review

SHOULD THE PATIENT KNOW THE TRUTH? A response of Physicians, Nurses, Clergymen, Lawyers. Edited by Samuel Standard, M.D., and Helmuth Nathan, M.D. Springer Publishing Company, Inc., New York, 1955. Cloth, pp. 159. 1955. Price $3.00.

The well qualified group of authors who composed this interesting symposium handle every facet of a complex ethical question, "Should the patient know the truth about his disease?" The consensus is that no single, unequivocal reply can be given. The problem is explored from the ethical, religious, and medical point of view. Everyone agrees that the over-riding consideration is the welfare of the patient. What the patient is told must be determined by the nature of the disease and by the psychological and religious needs of the patient. If the disease offers no hope of recovery, the physician is governed largely by his knowledge of the patient in telling him the truth. The strong, well-integrated personality may be inspired to live his last days more nobly if he realizes how few days they are. Many patients do not want to be told the truth. Others may be comforted by the last rites administered by their particular communion. The physician who may be governed by neurotic impulses in his patient relationships is cautioned about the manner in which he handles this delicate situation.

The authors agree that telling the patient the truth about his malady in fatal cases depends upon sensitive balances, and that in hopeful cases the whole truth may be necessary to engage the patient as an ally in bringing about his recovery.

Like the solution to the problem of good and evil offered in the Book of Job, no unalterable answer can be given to the query propounded in these brief essays. But, also like the Book of Job, the catalog of possible solutions is reviewed. The reader must not expect to find untapped nuggets of wisdom nor unusually brilliant insights into this extremely difficult and extremely important question.

The book is useful for its inclusive consideration of the many usual and unusual factors involved as one gropes for the right words to say to an individual patient. This wisdom comes from the long, practical experience of 24 doctors, nurses, clergymen, and lawyers.—Rabbi Joseph Levenson.

Honoring James Doenges, M.D., Anderson, Ind., President of the American Association of Physicians and Surgeons, a dinner was given recently in Bartlesville by C. L. Johnson, M.D. In addition to physicians attending, several business and industrial leaders of Tulsa and Bartlesville were present. Pictured above is a section of one of the tables. Left to right are: Herman F. Froebe, M.D., San Francisco; John E. McDonald, M.D., Tulsa; C. L. Johnson, M.D., Bartlesville; Doctor Doenges; W. W. Keeler, vice-president, Phillips Petroleum Company; Bill Doenges, Bartlesville, brother of Doctor Doenges, and Kieffer Davis, M.D., Bartlesville.

Sears-Roebuck Sets Up Medical Practice Loans

Alfred R. Sugg, M.D., Ada, is a member of the medical advisory board of the Sears-Roebuck Foundation which recently set up the "new practice" grants for physicians.

At least one loan in each of five regions across the country will be given in 1955 under an original $125,000 foundation grant.

The plan is designed to be self-expanding, with all repayments to be used for further grants. The foundation said young physicians often lack two essentials, capital and business "know-how". The plan is intended to fill this gap with the long-term, low-cost assistance. Grantees will make tax-free contributions to the foundation instead of paying interest. It is required that the physician first exhaust all local possibilities for financing, that his application indicate a need for a practice in the proposed locality and good possibilities for success and public service.

Applications should be sent to the office of the region in which the proposed medical practice is to be established. For Oklahoma, requests should be addressed to the Director, Sears-Roebuck Board, 1409 South Lamar St., Dallas 2, Texas.

Rountree Is President Of Surgical Congress

Charles R. Rountree, M.D., Oklahoma City, was installed as President of the Southwestern Surgical Congress at the seventh Annual Meeting held September 5, 6, and 7 at the Hotel Muehlebach in Kansas City, Missouri. C. M. O'Leary, M.D., also of Oklahoma City, is secretary of the group. Everett B. Neff, M.D., Oklahoma City, is Oklahoma Councilor.

Among the Oklahoma physicians appearing on the program were: George M. Brown, Jr., M.D. and Bruce H. Brown, M.D., McAlester, presented a paper entitled "Operative Cholangiography: A Critical Five Year Review;" Leo J. Starry, M.D., Oklahoma City, was one of the participants in the panel on "Pre- and Post-Operative Stress," and Joe M. Parker, M.D., Oklahoma City, was the discussor of the paper on "Acute Perforated Peptic Ulcer—an Analysis of 90 Cases".

The next annual meeting of the Congress will be held in Tuscon, Arizona during April, 1956.

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Delta-Cortef*

Fewer side effects at effective dosage levels

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PHYSICIAN PLACEMENT

This column is being initiated as a reference to physicians who have expressed a desire to locate or relocate in Oklahoma. To the best of our knowledge, the names, addresses, qualifications and availability are current and accurate.

The asterisk beside some names indicate that additional information concerning the physician, such as hospital of residency, personal data, references, etc. is avaibable in this office. All of the men listed here have completed internship.

Anyone who desires to contact these physicians may do so directly or is invited to use the executive office as an intermediary.

Dermatology

Leonard D. Grayson, 1301 Cornaga Ave., Far Rockaway 91, N.Y. Age 34, medical school unknown (Grade A), Board Eligible in Dermatology, available immediately.

*John M. Knox, Dermatology Dept., University Hospital, Ann Arbor, Mich., age unknown, Baylor University 1949, Board eligible in Dermatology, veteran, available since February 1, 1955.

General Practice

*Edwin S. Gaither, 82 W. Fayette St., Uniontown, Pa. Age 35, Jefferson Medical College, 1953, veteran, available since January, 1955.

*John V. Hume, Wilmington General Hospital, Wilmington, Delaware, age 31, University of Colorado 1953, residency in general practice, veteran, availabilty unknown.

Clive E. Jackson, negro, 3728 Hayes St., Apt. 1, Washington, 19, D. C., Howard University, military status unknown, available July 30, 1955.

Frank M. James, Ft. Randall Hospital and Clinic, Pickstown, South Dakota, age 46, University of Oklahoma 1947, veteran, availability unknown.

*William D. Stovall, Jr., Brodhead, Wisconsin, age 39, University of Wisconsin, 1944, veteran, available May 1, 1955.

*Andrew John Zumwalt, Cheyenne Agency, South Dakota, age 32, College of Medical Evangelists, 1949, on active duty with the P.H.S., available October 15, 1955.

Internal Medicine

*Marvin J. Colbert, Apt. 110, 809 S. Marshfield Ave., Chicago 12, Ill., age 31, University of Boston 1949, two and one-half years residency in internal medicine, veteran, available August 1, 1955.

*Robert Henry Frankenfeld, U. S. Naval Hospital, Quantico, Va., age 31, Cornell University 1947, Board eligible in Internal Medicine, active military duty, available October 1, 1955.

*Alfred M. Steinman, 515 Ocean Ave., Brooklyn 26, N. Y., age 32, Long Island College of Medicine 1949, residency in Internal Medicine and Cardiology, veteran, available immediately.

Orthopedics

*Andrew G. Hudacek, Kosair Crippled Children Hospital, Louisville 17, Kentucky, age 31, Georgetown University 1948, Board eligible in Orthopedics, veteran, available October 1, 1955.

Pathology

*James Kendall Boyd, 1745 S. St. Louis Ave., Tulsa, Okla., age 39, University of Tennessee 1942, Board eligible in Pathology, veteran, available immediately.

Pediatrics

*Arthur T. Hall, 314 Allison St., Sayre, Pa., age 33, University of Rochester 1952, two year residency in Pediatrics, veteran, available July 1, 1955.

Surgery

Alice F. Gambill, 1605 Clover Lane, Fort Worth, Texas, University of Oklahoma 1949, one year residency in General Surgery, available immediately.

*Valerio J. Federici, Kings County Hospital, Brooklyn 3, N. Y., age unknown, Jefferson Medical College 1948, Board eligible in General Surgery, veteran, available June, 1955.

*William A. Holbrook, Jr., University Hospital, Baltimore, Maryland, age 34, University of Maryland 1945, Board qualified in General Surgery, veteran, available August, 1955.

*C. Richard Jernigan, Parkland Memorial Hospital, Dallas, Texas, age 29, Southwestern Medical College 1948, will be Board qualified in General Surgery January 1, 1956, veteran, available January 1, 1956.

*Chester T. Podgorski, 3926 N. Keeler Ave., Chicago, Ill., age 37, Loyola 1943, three year residency in General Surgery, veteran, available April 13, 1955.

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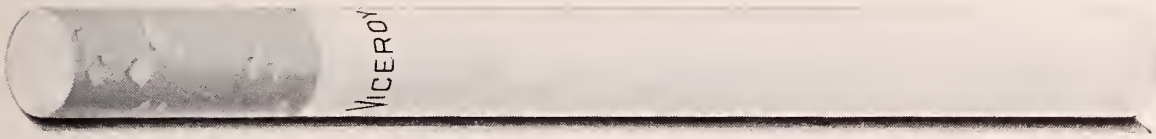

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World's Most Popular Filter Tip Cigarette
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New Officers Named To Medical Board

W. Pat Fite, M.D., Muskogee, was named President of the Board of Medical Examiners at a meeting held in Oklahoma City September 4. Other new officers are: L. S. Willour, M.D., McAlester, Vice-President; and E. F. Lester, M.D., Oklahoma City, Secretary. Clinton Gallaher, M.D., Shawnee, who had served as secretary for a number of years, resigned from the position.

Additional members of the Board are E. M. Gullatt, M.D., Ada; M. H. Newman, M.D., Shattuck; and L. E. Woods, M.D., Chickasha; Doctor Gallaher and the above named officers.

W. PAT FITE, M.D.

College of Physicians To Hold Regional Meeting

The Arkansas-Oklahoma Regional Meeting of the American College of Physicians will be held at Hot Springs, Arkansas, Saturday, December 3, with headquarters at the Arlington Hotel. Bert F. Keltz, M.D., Oklahoma City, is governor for Oklahoma and A. A. Blair, M.D., Fort Smith, is governor for Arkansas. All members of the State Medical Association are invited to attend the meeting.

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1954 'Alflorone' | 1955 Deltra®

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(PREDNISOLONE, MERCK)
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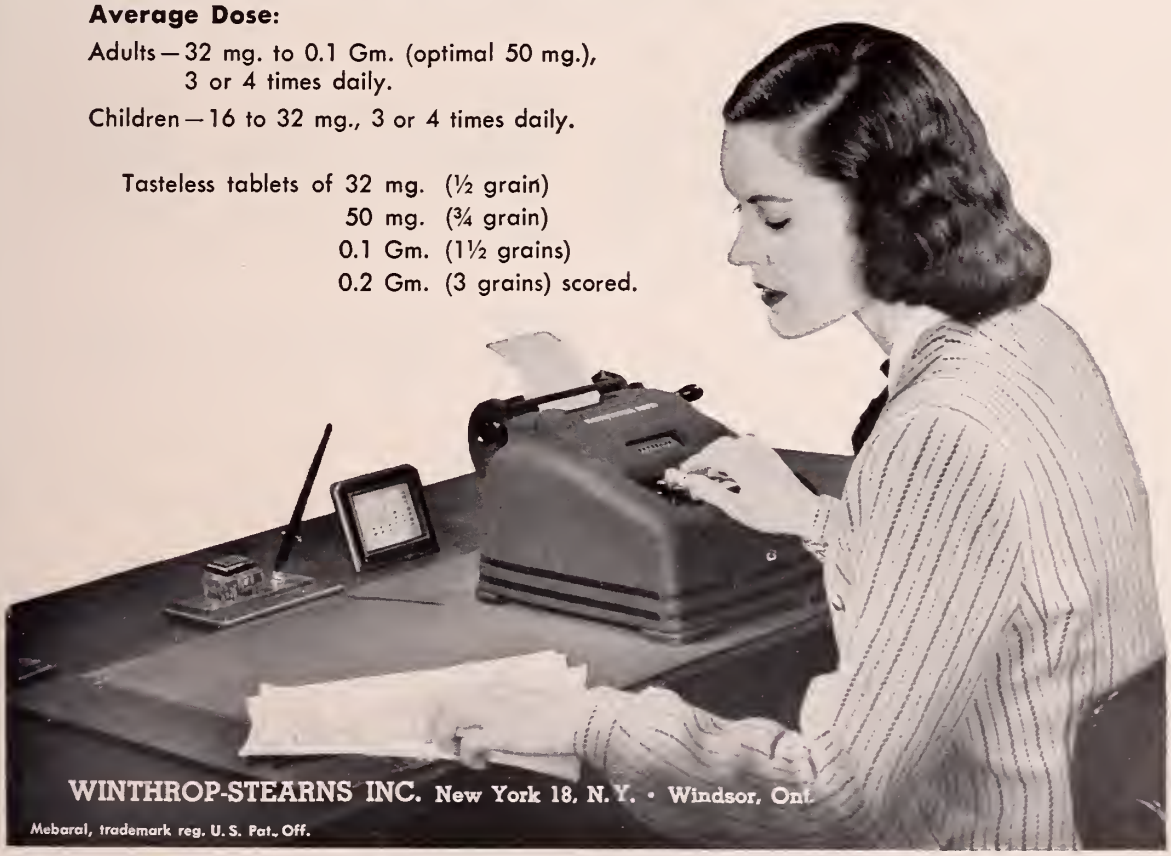

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Editorials

A Tribute

There is a welling up that comes from within, buoyant in quality that causes a smile visible only to oneself. We have all experienced this—at times from going to church—at times from a good deed impulsively done—at times just by coming conversationally in touch with someone. Jim Stevenson had a quality about him that regularly produced this response. It is a quality that is not definable but which had many facets. One did not weigh Jimmie's words for a hidden meaning. It was never hidden. Long ago it was apparent that there was no hidden motive—no desire for selfish gain. Such a mind and heart is handicapped by our democratic system—but he gave a mighty heave within the framework of that system to initiate the establishment of Blue Cross—later Blue Shield, and continued to be a source of strength to the administration of those organzations.

Each man elected to high office in his professional societies feels honored and is, for there is rarely an opportunity to seek it. Men have been honored with office simply because they had been loyal, faithful members with no thought of their ability or desire to contribute anything beyond their name and presence. If one can be said to deserve the office of president of his county society and president of his state society, Jim Stevenson certainly did. To him, these may have been honors but they represented jobs which he earnestly undertook. He contributed everything that he could and this was considerable. His road was made easier by his own personality and his own being, for he had the respect and admiration of everyone with whom he worked.

Maybe a little of him rubbed off on the rest of us. At any rate we are grateful that he passed our way.

To A Great Man

No man, it is said, is indispensable in his own sphere. Some, however, leave a niche far more difficult to fill than this implies. One such man was Dr. James Stevenson.

His was a full life in rich experience, association and service—altruistic, self effacing, devoted to those causes and influences which were for the betterment and welfare of man so he was dedicated to the improvement of the medical profession. Never did he pass an opportunity nor neglect a delegated responsibility which was aimed toward progressive achievements in the field of medicine.

Doctor Stevenson served his local county medical society in every capacity and the State Medical Association as Councilor, as President and as Delegate to the American Medical Association. In the House of Delegates he served on the Committee on Constitution and By-Laws until his health forced his retirement.

He was both a pioneer and a crusader in the field of medical, surgical and hospital prepayment plans in Oklahoma at a time when this was little understood and in many quarters actively opposed. As much as to any other man credit should be accorded him for the tremendous and far reaching accomplishment in this field. Doctor Stevenson was a member of the original Grievance Committee of the State Medical Association. His years of experience and accumulated wisdom, his sense of fairness and his vision went far to stabilize its organization and operation.—G.H.G.

Time Marches On

"The physicians of Oklahoma can do the state a real worthwhile service by encouraging youngsters to enter the Oklahoma Science Talent Search," Dr. H. H. Bliss, Director of the OU Science Service, said recently. The Science Service is helping with the statewide search, which began on September 10 and ends December 15.

"We are attempting to locate talented highschool boys and girls who know their fundamentals in science and show traits needed later for professional practice," Bliss said. The initial and continuing contacts with the students will be made through the highschool science teachers.

"Men in the science-based professions, such as physicians, can help the program immeasurably as consultants," Bliss said. "Often the chance to speak to a specialist gives the aspiring student just the bolstering of confidence he needs. Sometimes it is the opportunity to read the literature or to borrow a piece of equipment that fans the fire of enthusiasm sparked by the teacher."

The Oklahoma search is part of a national search conducted by the Science Clubs of America. The top 300 "winners" and "honorable mentions" will be invited to Washington, D. C., for personal interviews.

Last year two Oklahoma boys placed as honorable mentions in the national search. The OU Science Service is seeking more Oklahoma applications and winners this year.

There is the thought today that man's entire behavior is governed in one way or another by his ego. Perhaps this is obvious for the most but the history of civilization as a whole and that of the church in particular makes this seem an unlikely general rule. At least it is difficult to point out the part that the ego plays. Man like St. Francis of Assisi, Blessed Martin de Pores (a Negro and the founder of modern social service), St. John Vianney, Mahatma Gandhi, Abraham Lincoln, Robert E. Lee, all were impelled by motives in certain aspects of their behavior in which the ego is not apparent. Consider the 11 disciples with the twelfth running psychiatrically true to form. I suppose that all the actions of these people can be rationalized to bring out the force of the ego.

It seems to me, however, that certain of us are tuned in to a level of conception of civic, human and personal responsibility that is denied to most of us. This is not necessarily combined with great intellectual potential. It is said that St. John Vianney by the intelligence tests in use today would be considered actually stupid. When this potential in an individual is high, it should be fostered. This issue of the *Journal* is dedicated to one who was to tuned in. The section above is a plea to help discover and foster the young scientist. We hope that in most of these young people the two are combined for the world today has little use for the brilliant scientist unless he has a soul to match.

DO YOU HAVE AN IDEA which could form the basis of a Scientific Exhibit at the Annual Meeting next spring? Watch for the announcement in the December issue of the *Journal*.

Scientific Articles

Use of Radioactive Gold in
PLEURAL EFFUSION *and* ASCITES

P. E. RUSSO, M.D., C. G. COIN, M.D. and W. W. EVANS, M.S.

Introduction

Radioactive Gold-198 has been in clinical use for approximately six years. One of the most valuable applications has been the instillation of this isotope into the pleural and peritoneal cavity in which fluid accumulation due to malignancy is present. The procedure has been found to be an effective palliative measure in retarding the accumulation of fluid.

Physical Properties

Gold-198 is produced in a nuclear reactor by bombarding stable Gold-197 with neutrons. The resulting radioisotope disintegrates principally with the emission of a 0.98 mev beta particle and a 0.41 mev gamma ray, yielding the stable isotope Hg-198. The half life of Au-198 is 2.7 days. Since beta particles The gamma rays from Au-range in tissue. For the beta particles from Au-198 this range is 3.8 mm. in water. Gamma rays, on the other hand, are similar to x-rays and are much more penetrating than beta particle. The gamma rays from Au-198 require approximately 3 mm. of lead to reduce their intensity by one half. Several centimeters of tissue are necessary to produce this same reduction in intensity. In tissue, therefore, most of the radiation effects are confined to the immediate vicinity of the gold particles although there are diminished radiation effects present at a few centimeters distance due to the gamma rays. The 2.7 day half life causes about 95 per cent of the radiation energy to be delivered in eleven days.

When the radiogold is produced in colloidal form, the colloid particles result in trillions of point sources, each of which is between .003 and .007 microns in size. This allows a fairly even distribution of radiant energy to be delivered to large surface areas. In addition, these small colloidal gold particles are ingested by phagocytes and carried to surface areas and into lymphatic channels. The colloidal gold has a deep cherry-red color. It is shipped in a small glass bottle which has a sealed rubber cap on top. The bottle is enclosed in a lead shield .5 to 2 centimeters in thickness. The colloid is sterile, pyrogen free, and may be diluted with water, saline or many other solutions. Epinephrine or hyaluronidase may also be added.

THE AUTHORS

Three authors wrote "Use of Radioactive Colloidal Gold in Pleural Effusion and Ascites." P. E. Russo, M.D., is a practicing radiologist in Oklahoma City and a graduate of St. Louis University School of Medicine. He has been certified by the American Board of Radiology. C. G. Coin, M.D. and W. W. Evans, M.S. are from the Department of Radiology, University of Oklahoma School of Medicine and University Hospitals.

Indications for Use

It should be emphasized that intracavitary radioactive gold administration is a palliative measure most useful as an adjunct to surgery and external radiation therapy. Recurrent ascites and pleural effusion due to peritoneal and pleural metastases are at present the primary indications for radioactive gold. In addition to these indications "prophylactic" intraperitoneal radioactive gold may be warranted in those cases of ovarian malignancy in which contamination of the peritoneal cavity at the time of surgery by malignant cells is likely. In addition to fullfilling conditions of one of the above indications for treatment patients should be selected who have an estimated life expectancy of over three months.

Technic

Cases of intraperitoneal administration are handled in the following manner. Following suitable premedication, the patient is transferred to the x-ray diagnostic department. Paracentesis is performed when significant amounts of ascites is present. Next, pneumoperitoneum is induced through an 18 gauge needle utilizing 1200 to 1800 c.c. of oxygen. Radiographs of the abdomen are then made in transabdominal, right lateral decubitus and left lateral decubitus positions. Diagnostic pneumoperitoneum serves two purposes. First, it insures that the needle is within the peritoneal cavity. Second, it excludes or defines the presence of loculations. In the event of loculations, each cavity must be tapped and its size estimated and the dose of gold divided accordingly. We have been utilizing diagnostic pneumoperitoneum routinely as a result of observing the technic as practiced by Dr. J. R. Maxfield of Dallas, Texas. Next, after suturing the paracentesis wound and releasing some of the oxygen, patency of the tubing system is tested by allowing about 50 c.c. of normal saline to run from a gravity flow bottle of normal saline through an intravenous type tubing which is attached to the pneumoperitoneum needle. If flow is satisfactory and no leaks are present, the tubing is clamped. Sixteen gauge needles are then attached to the needle adaptors. The needle on the tubing from the patient is next inserted through the rubber seal of the bottle containing the desired dose of radiogold. The needle on the tubing from the saline is then inserted through the rubber seal. Tubing clamps are released and the gold is instilled by gravity flow. Two to four hundred c.c. of normal saline are allowed to flow through the system into the peritoneal cavity to dilute the gold colloid. The patient is returned to the ward with orders to change her position every 10-15 minutes for the next four hours and every hour for the following 24 hours. This results in approximately homogenous distribution of the gold. One day following intracavitary gold, the patient is placed on a 14 x 17 par speed screen x-ray cassette for 3-5 minutes and a radioautograph is thus obtained which indicates the distribution of the gold within the peritoneal cavity.

A similar technic is used for the intrapleural administration of gold. Following thoracantesis a 200-300 c.c. pneumothorax is induced and radiographs are taken in upright and lateral decubitis positions. Gold is then administered as described above for intraperitoneal cases.

Fig. 1-a.—Transabdominal film taken after injection of 1500 c.c. of oxygen into the peritoneal cavity; note tumor implants located along the inner surface of the abdominal wall.

Fig. 1-b.—Left lateral decubitus film; shows that the fluid in the peritoneal cavity is not loculated.

Fig. 1-c.—Right lateral decubitus fi note tumor masses located just neath the right diaphragm and lat to the liver.

Hazards

There are two types of hazards present in the handling of radiogold. The first of these, personnel overexposure to gamma rays, is relatively easy to avoid by using shielding material and incorporating distance between the individual doing the handling and the gold proper. The second type of hazard, contamination of personnel clothing and instruments, is more difficult to manage since minute quantities of radioactive material may constitute a considerable hazard if undetected. Consequently the clothing of all personnel involved in the procedure, including that of the patient, is scanned with an instrument sensitive to beta rays. If any activity is detected, the clothing is removed and stored in an unused space for several half lives. Since the hands are more frequently in close proximity to the gold colloid, rubber gloves are essential for all personnel involved. Syringes, needles and other instruments used in the procedure are similarly scanned for contamination. If activity is found, they are stored for a time interval sufficient to remove any possibility of hazard and then returned to the supply room.

Since rarely more than 150 millicuries of radiogold are instilled into a patient at one time, the patient presents less of a radiation hazard toward personnel than an ordinary uterine cervical radium implant. Nevertheless it is wise to instruct ward personnel to occupy the immediate space around the patient for a minimum of time. Likewise it would be considered unwise to have two patients containing significant amounts of radioactivity in adjacent beds on the ward. The excreta from a patient containing radiogold does not present a significant hazard since the gold remains intracavitary for several days and is not present in urine, feces or sputum unless a fistula is present.

Results

In table I we have listed our results in a small series of cases.

Total Cases 22—Results		Good	Poor	Recent
Ascites	13	7	4	2
Pleural effusion	6	4	1	1
For implants	3	—	—	—
	—	—	—	—
	22	11	5	3

TABLE I

In Table II are the types of cases we have treated.

RESULTS		Good	Poor	Recent
Ovary	13	7	2	2
Breast	4	3	1	—
Krunkenberg	1	1	—	—
Carcinomatosis	1	1	—	—
Lung	1	—	—	1
Pseudomyxoma Peritonei	1	—	1	—
Unknown	1	1	—	—

TABLE II

Conclusions

We have found radioactive colloidal gold useful as a palliative measure in cases of ascites and pleural effusions due to metastatic malignant diseases. The best results have been in cases of recurrent acites due to malignant ovarian tumors. Selection of cases for this type of procedure is important and only those cases which require frequent tapping, and only patients who are expected to survive three-six months should be considered as candidates. This procedure may be repeated after several months if fluid begins to accumulate at a faster rate and especially if the first procedure gave palliation. As a heroic last effort to do something to a moribund patient should be discouraged as it only brings discredit to this form of treatment. Installation of radiogold immediately after surgery in malignant ovarian tumor when spillage has occurred or peritoneal implants are found, is advocated by many workers. however it is most difficult to evaluate this method since one is not able to judge the course of this disease or what effect external radiation had in the control of the disease. Radiogold has not supplanted the use of post-operative external radiation in these cases. It is hoped that in the near future that some other radioactive collodial substances will be developed which will have all the advantages of radiogold without the hazards of radiation inherent to our present collodial gold.

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OCCUPATIONAL DERMATOSES *in Oklahoma*

C. JACK YOUNG, M.D.

Since 1915 an employee in Oklahoma industry has been financially protected from industrial accidents by the Workman's Compensation Law. This law was interpreted to apply only to actual injuries received on the job and did not apply to occupational diseases arising out of an injury in the course of employment in the so-called hazardous occupations. This distinguishing feature between industrial injury and occupational disease is to be found in the fact that industrial injury connotes suddenness of onset while an occupational disease requires a time factor.

In 1953 the Oklahoma Legislature passed the Occupational Disease Act. Thus, for the first time, certain occupational diseases resulting from the nature of employment were placed within the bounds of the Compensation Law. This law provides for the including of "dermatitis due to oil, cutting compounds or lubricants, dust, liquids, fumes, gases or vapors."[1]

Schwartz states that about five per cent of all cases of industrial compensation are occupational diseases and that about 65 per cent of all occupational diseases are dermatoses.[2] He estimates that the average loss of time per year for compensated cases of occupational dermatoses is about 10 weeks and the average compensation is about $190, including medical and compensation payments. The annual loss from occupational dermatoses in the United States is approximately $100,000,000.

As the Oklahoma industrial horizon broadens we as physicians are going to encounter more industrial dermatoses. Let us evaluate the compensable occupational diseases as reported to the State Industrial Commission in 15 months from June, 1953, through September, 1954.

THE AUTHOR

C. Jack Young, M.D., who wrote "Occupational Dermatoses in Oklahoma," practices dermatology and syphilology in Oklahoma City. He was graduated from the University of Oklahoma School of Medicine and is a member of the American Board of Dermatology and Syphilology.

(1)	*Occupational Dermatitis from:*	
(a)	Detergent	23
(b)	Plant Spray	1
(c)	Kerosene	3
(d)	Ethyl Gas	1
(e)	Cement	7
(f)	Drilling Mud	1
(g)	Steel Cleaner	1
(h)	Paint	3
(i)	Grease	1
(j)	Printer's Ink	1
(k)	Sand Blastings	1
(l)	Cuttings Oils	6
(m)	Molten Glass Vapor	1
(n)	Cow Teat Cleaner	1
(o)	Baker's Spices	1
(p)	Chicken Feathers	1
(q)	Blasting Powder	1
(r)	Zinc Chromate	3
(s)	Fluorescent Lights	1
(t)	Acid Burns	1
(u)	Cellulitis in Preexisting Dermatitis	1
(v)	Lye Water	1
(w)	Naphtha	1
(x)	Termite Gas	1
	Total	63
(2)	*Other Occupational Diseases:*	
(a)	Silicosis	37
(b)	Silicosis with Tuberculosis	1
(c)	Carbon Tetra-Chloride Toxicity	1
(d)	Lead Poisoning	1
(e)	Tenosynovitis	1
	Total	41

TABLE I—Causes of occupational diseases reported to Oklahoma Industrial Commission from June, 1953, through September, 1954.

Thus we could see out of 104 cases reported, 63 have been dermatological, with 24 reported causative agents. Most cases resulted from solvents or detergents. In all probability this actually represented only a small fraction of many unreported cases. I believe it reasonable to assume that more claims will be filed as employees realize the compensability of their conditions.

Etiological Factors in Industrial Dermatoses

The salient factors in industrial dermatoses may be divided into predisposing and actual causes. The predisposing causes are race, type of skin, perspiration, diet, age, sex, season of year, cleanliness, concomitant skin diseases and the patient's inherited allergic make-up. The actual causes may be divided into five main groups:

1. *Mechanical*
   - Fricton
   - Pressure
   - Trauma
2. *Physical*
   - Heat
   - Cold
   - Electricity
   - Sunlight
   - X-ray and Radium
   - Isotopes
3. *Plant Poisons*
4. *Chemical*
   - Inorganic
   - Organic
5. *Biological*
   - Bacteria
   - Fungi
   - Animal Parasites

A little "stable thinking" or "horse-sense" will tell us that hot water softens the epidermis, high temperatures predispose to heat eruptions and actinic rays result in light-sensitive eruptions as well as precancerous actinic keratoses.

The largest group of industrial dermatoses comes from contact with either inorganic or organic chemical agents. Chemical agents may be classified into their action on the skin as follows:

1. Keratin Solvents
2. Fat Solvents
3. Hydroscopic Agents
4. Protein Precipitants
5. Oxidizers
6. Keratogenic Agents
7. Hydrolizers
8. Photosensitizers

All chemical agents must be evaluated as to whether they are primary skin irritants, or actual sensitizers.

A primary skin irritant is one which will cause dermatitis by direct action at the site of contact, that is to say, practically every worker would have a reaction. A good example of this would be calcium oxide or quicklime burns seen in the building trades.

A cutaneous sensitizer is an agent which does not give a reaction on initial contact, but may effect changes in the skin so that subsequent contact on other parts of the body will cause dermatitis. This is the picture seen in morticians who develop a sensitivity to formaldehyde, or the tire company employee who reacts to rubber compounds.

Diagnoses of Industrial Dermatoses

The history is the key in industrial dermatoses. One must be certain there was no pre-employment dermatitis and that the eruption developed during a period of industrial exposure. It is good to know if fellow workers or new employees on the same job have had similar eruptions. The history of subjective or objective improvement when the employee is on weekends or vacations is also helpful. We should not forget the possibility of some home project or hobby entering into the picture.

The distribution of the eruption is a diagnostic aid. Patients should be completely undressed for examination. Occupational dermatitis usually begins on the exposed parts. Covered areas may be involved when the worker does not change clothes frequently. Friction areas at sleeve edges, belt and collar lines, as well as glove edges should be checked. If there is a high index of sensitivity the whole body may be involved.

The appearance of the lesions is often characteristic of certain irritants. Paronychia is seen in dishwashers and cannery workers. Acne-like eruptions appear on contact with insoluble cutting oils. Tars increase protosensitivity. Solvents predispose to dry fissured eczemas. Arsenicals may result in palm and plantar keratoses.

Differential Diagnosis

The industrial physician, general practitioner and dermatologist should always completely undress and examine the patient. He then should rule out seborrheic dermatitis, psoriasis, mycotic infections with or without secondary "ids," lichen planus, neurodermatitis, erythema multiforme, pityriasis rosea, stasis dermatitis with generalized autosensitization, drug eruptions and secondary syphilis.

Use and Abuse of Patch Test

The patch test with a suspected causative product is most helpful. The most common pitfall is the use of strong concentrations of chemicals. For example, frequent error is testing with a soap shaving rather than the dilate solution actually used on the job. Standard lists can be obtained for the optimal concentration and vehicle to be used with any compound. One should likewise patch test himself or another person to be sure the compound is not a primary irritant. The usual patch test should be checked in 24 hours; if negative it should be continued for another 24 hours. Occasionally the reaction will appear 24 to 48 hours after the patch test is removed.

In an extensive eruption on a hypersensitive individual one should use judicious discretion in evaluating the importance of the information obtained with the possibility of an exacerbation of the eruption. In a mild hand eruption one can generally patch test without undue fears.

The pre-employment patch test has a great appeal to the uninitiated. However, since the prospective employee has had no prior exposure to the compounds to be contacted it is of little value.

Malingering

The bizarre picture of the lesions present tends to arouse one's index of suspicion. The lesions are generally on accessible parts of the body, angulated, may be regularly spread and may be unilateral. The patient may be vague in answering questions. If one covers the lesion with an elastoplast dressing, the patient may produce new lesions on other areas. When one has sufficient evidence the facts may be presented to the patient.

Treatment

Treatment may be divided into therapeutic and preventive categories. For acute dermatoses one should use continuous cool applications with Burrows' solution, boric solution or potassium permangenate 1: 10,000 for 24 to 72 hours. As the acuteness regresses calomine liniment may be used. When drying and drawing occurs one may use zinc oxide ointment with 25 to 50 per cent olive oil. Sedation may be indicated.

Chemical burns should be washed and then treated aseptically. The lichenified dermatoses respond to mild coal tar ointment and superficial x-ray. Decentralization by injection or oral ingestion of compounds is of no value in industrial dermatoses except for poison ivy and ragweed dermatoses.

Preventive Measures

When indicated the employers should furnish protective gloves, aprons and boots. The shop should be clean and well ventilated. Shower baths should be available. The biggest protective boom in the small industrial plant has been the development of the protective creams. Kerodex, Proderna and Covicone have all been received favorably. In all preventive measures, one must educate the employee as to "why" we should use this preventive measure.

Summary

A discussion of the occupational disease Law for Oklahoma is presented. The Industrial dermatoses reported to the Oklahoma State Industrial Commission since the law was created in 1953 are reviewed.

Of 104 occupational diseases, 63 were dermatological, with 24 causative agents discussed. The predisposing and actual causes, diagnosis, treatment and prevention of industrial dermatitis is discussed. The use and abuse of the patch test in industrial dermatology is given.

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DO YOU HAVE AN IDEA which could form the basis of a Scientific Exhibit at the Annual Meeting next spring? Watch for the announcement in the December issue of the *Journal*.

The PROBLEM *of the* PAINFUL SPINE

WILLIAM K. ISHMAEL, M.D., F.A.C.P.

Patients with complaints referable to the spine are a problem no matter what type of practice one engages in. Recognition of the syndrome associated with rupture of the intervertebral disc along with knowledge gained by surgical intervention of this disorder has given us considerable insight into problems of the spine.

The symptoms arising from disorders of the spine are varied, yet to a large extent they can be grouped into certain syndromes.

The cervical tension syndrome arises from discrepancies of the cervical vertebrae. The resultant symptoms include pain, soreness, or stiffness of the neck referred to the occipital, parietal, or frontal areas. Mild to severe unilateral or bilateral headaches frequently result. Pain may radiate into the shoulders, arms, and even as far as to the hands or fingers, or there may be associated pain in the chest, middorsal or scapular areas. In patients past 40 years of age, a frozen shoulder or the shoulder-hand syndrome may complicate this picture. Dizziness or vertigo is not an infrequent symptom. Some patients describe symptoms of "black-out" sensations or "crazy feelings" in the head.

If the lumbosacral or lumbar area is involved, low backache, "lumbago" attacks, pain in the sacro-iliac, or posterior or lateral hip areas may occur. There is usually aching in the legs, or there may be sharp radicular pains coursing down the sciatic nerve into the foot; or there may be pain in the coccygeal area with a variety of symptoms reported in or about the rectum or perineum.

When the thoracolumbar junction becomes symptomatic, pain may refer into the upper abdomen or lower chest. This situation may closely simulate intra-abdominal or intrathoracic disease and has a marked tendency to be chronically painful. Pain or inflammation does not occur in the sacro-iliac joints as frequently as was previously thought. It is true, however, that rheumatoid spondylitis, sclerosing ileitis and certain postpartum conditions may involve the sacro-iliac joints. There may be midthoracic arthritis with pain radiating into the chest or intercostal areas.

THE AUTHOR

William K. Ishmael, M.D., author of "The Problem of the Painful Spine," is an Oklahoma City physician. He was graduated from the University of Oklahoma School of Medicine and has been certified by the board of Internal Medicine. His specialty is arthritis.

Contributing Causes of Pain Associated With Various Disorders of the Spine.

Three factors contribute to the symptoms and findings resulting from spinal disorders:

(1) Organic lesions

(2) Postural, occupational or mechanical fatigue or stress

(3) Psychomotor influences or malingering.

Any of these three factors may suffice to send a patient to a physician's office. There are elements of all three, however, in most patients. The relative importance of these factors may be ascertained in the musculoskeletal system more easily than in any other system of the body. These changes are summarized in Table 1.

Discussion

The differentiation of an organic lesion producing symptoms in the spine may be difficult, since more than one hundred conditions may be classed as "rheumatism." Fortunately, however, the organic lesion in most patients may be classed under six or seven headings.

Table 2 illustrates the diagnoses reported on the charts of 1,000 patients with primary complaints of the spine seen at the McBride Clinic.

(1) *Organic Lesions:* Congenital or developmental deformities.

Deformities which alter the anteroposterior balance of the spine are most often symptomatic. They include lordosis of the lumbar spine, kyphosis of the dorsal spine and "forward-thrust" of the head and neck. Lateral deviations probably are not so important. Table 3 illustrates this point. Of the 428 children with scoliosis sufficiently severe to warrant surgical intervention or cast, only three returned in later years with pain or discomfort. Two of these three had had a surgical procedure and indicated their pain in either the upper or lower end of the graft. Space does not permit me to differentiate among these organic lesions. It is important, however, that a patient whose pain pattern is purely psychomotor should not be treated for an organic lesion. On the other hand, an organic lesion may intensify or initiate pain resulting from postural stress, and thus treatment of this lesion might become imperative.

(2) *Postural, Occupational or Mechanical Fatigue or Stress.*

In considering the pain resulting from postural, mechanical, or occupational stress, one frequently must probe deeper than the apparent exciting cause. Though this factor may be the immediate cause of the pain, it is frequently superimposed on a pre-existing organic lesion. Postural fatigue also may result from nervous tension provoking the "on guard" attitude. The first cause of back pain is fatigue. Normally, any musculoskeletal structure fatigues after a modicum of exertion and is refreshed after an adequate period of relaxation. Generally speaking, patients with musculoskeletal pains are those who cannot rest when tired. They usually are people who "key up" instead of getting sleepy as they become fatigued and thus pursue their endeavors with devastating enthusiasm and determination. Many of them thus develop a poor pattern of sleeping, which further increases their fatigue, and the vicious cycle becomes all to obvious. *This*

A GUIDE TO THE DIFFERENTIATION OF ORGANIC FROM POSTURAL OR PSYCHOMOTOR, OR MALINGERING FACTORS IN THE CAUSE OF MUSCULOSKELETAL COMPLAINTS

	Organic Disease	Postural or Mechanical Strain	Psychomotor or Malingering
Stiffness and soreness upon arising in A.M.	Marked and significant	No, unless patient has lain in position of strain	"Worse all the time" or "never any better"
Complaints in predictable area	Yes	Yes	No. "Hurt everywhere."
Relieved, at least to a degree, by analgesics	Yes	Very slight, if any	"Nothing helps"
Affected by weather	Yes	No	Not consistently
Does pain awaken patient at night?	Yes, especially if an expanding lesion in bone (tumor, abscess). No, if lesion is mild.	Not unless postural strain occurs. Relieved by changing positions.	No. May have insomnia from other causes.
Degree of pain proportionate to objective findings	Yes	No	No
Physical findings in predictable areas	Yes	Yes	No. "Touch-me-not" reaction.
Evidence of signs of organic disease	Apt to be present	Yes, if anatomical defect is cause of strain. No, otherwise.	No
Radiographic change	Usually present	Only if anatomical defect is cause	No. If changes are present, of no significance.
Laboratory change	Yes, if characteristic of disease	No, unless part of factor causing fatigability	None pertinent to disease

Modified from Hench, P.S.: Postgrad. Med. *1*:460-466 (June) 1947.

TABLE 1

DIAGNOSES RECORDED ON 1,000 CONSECUTIVELY ADMITTED PATIENTS WHOSE COMPLAINTS WERE PRIMARILY REFERABLE TO THE SPINE

DIAGNOSIS	Orthopedic	Industrial	Arthritic	Total
Cervical lesions	39	12	47	98
Disc syndromes	149	47	8	204
Postural or low back strains	86	67	31	184
Metabolic diseases	40	6	102	148
Rheumatoid arthritis and rheumatoid spondylitis	7	2	69	78
Psychomotor or malingering	12	2	5	19
Neoplasm	1	0	6	7
Unstable lumbosacral joint	29	9	71	109
Traumatic compression fracture	20	4	2	26
Postural or strain of thoracic kyphosis	11	1	1	13
Spondylolisthesis	24	13	7	44
Other congenital defects	62	8	0	70
Total	480	171	349	1000

TABLE 2

phenomenon of pursuing endeavors beyond one's endurance and then becoming increasingly keyed up and tense as the fatigue deepens is one of the chief factors in musculoskeletal pain.

(3) *Psychomatic Influence in the Cause of Back Pain, and the Malingerer.*

The psyche produces spinal complaints through two mechanisms. One is encountered in the patient with conversion hysteria or hypochondriasis, and is known as psychogenic rheumatism. The other is the psychomotor influence, and as noted above, is largely the result of conscientious endeavor or an exaggerated sense of duty of responsibility. Any situation which connotes trouble, the stress of confinement, and the entrapment syndromes frequently add to this psychomotor stress. The psychogenic influence in spinal complaints is probably best illustrated in Tables 4 and 5. As shown in these tables, occupations which one would ordinarily associate with severe trauma to the spine actually produce less back and neck complaints than result from more sedentary responsible and exacting positions. It is logical that the person who uses the musculoskeletal system in a constructive manner has a stronger structure and, therefore, strains or tires less easily. This undoubtedly explains to a very great extent the lack of complaints in these labor groups. On the other hand, the modern farmer or rancher does enough physical work to have a strong back yet he frequently has serious disorders of the spine. "Tractor backs" were unkown until headlights were placed on tractors. It is impossible to plow all day and all night without sooner or later producing stress. A stress reaction in the musculoskeletal system may be compared with a blister in the hand following the use of a shovel. Repeated stress reactions result in degenerative changes or "wearing out" of the articular structure. It should also be pointed out that if the shovel had been discarded a little earlier, the blister would not have developed.

Treatment

Certainly most patients with painful backs and necks can be managed successfully. Of prime importance is the recognition of the three factors which contribute to their pain and dealing with each of these factors indi-

FOLLOW-UP ON 428 CHILDREN WITH IDIOPATHIC SCOLIOSIS SUFFICIENTLY SEVERE TO WARRANT TREATMENT WITH CAST OR SURGICAL INTERVENTION

Three of 428 patients (0.7%) returned in later life because of pain in the back or neck. All of these with pain had had surgical fusion. None of the nonoperated patients has had pain in later life. Two had pain at the upper end of the fused area. One had pseudoarthrosis.

TABLE 3

vidually. Thus the management of each patient must be completely individualized. The farmer who plows all night as well as all day will surely break down at the upper or lower margins of a previously placed bone graft. The woman who plays bridge for hours without any other exercise will continue having headaches, dizzy spells and shoulder-arm pain. A protruded disc with mechanical impingement of the nerve radical may require surgical intervention. All of the antirheumatic and analgesic drugs known will not relieve the patient whose pain does not occur in any predictable pattern even though lipping may be evident on the radiograph of the spine.

Space does not permit detailed discussion of the management of all the disorders which may involve the spine. Once the particular factors contributing to the patient's complaints have been recognized, one may deal with the patient's complaints more comprehensively. The patient most frequently encountered is the woman beyond 40 years of age with neck and low back syndrome. She may also have complaints of the fingers and knees. Her symptom complex indicates an organic basis for her complaints associated with a strong postural stress overlay and most likely there is present a significant amount of psychomotor phenomena. The radiograms reveal marginal lipping, and the laboratory data are usually within normal limits. She is ordinarily found to have degenerative arthritis, with a considerable element of fatigue and tension adding to her complaints. Her symptoms have dated since the menopause. She has exacerbations following unusual events such as caring for a sick child or parent, spring house cleaning, gardening, the Christmas holiday season, and so on.

If, in evaluating this patient, one concludes that she tires more easily than she should, nutritional or steroid deficiency must be considered as a cause. Metabolic disturbances or infections, if present, must be corrected insofar as possible. Frequently, simply correcting the factors producing fatigability will relieve the patient of her complaints. A balanced diet is necessary; and if weight control is important, the total caloric intake must be controlled. Next, the patient is thoroughly indoctrinated in the avoidance of stress. Emphasis is placed on the importance of not exceeding the body's endurance. It is specifically pointed out to the patient that the inflamed or stress reaction occurs only when she has exceeded her endurance, and to avoid such reactions, she must alter her occupation, position or endeavor. Not infrequently, controlling this one factor renders the patient symptom-free. The patient must then be taught how to avoid unnecessary strain of the spine. Emphasis is placed on avoiding lordotic strains of the lower back, forward-thrust strains of the head and neck, and kyphotic strains of the middorsal

OCCUPATIONS OF 1,000 PATIENTS WITH PAIN REFERABLE TO THE SPINE

OCCUPATION	Orthopedic	Industrial	Arthritic	Total
Farmer and rancher	55	2	21	78
Housewife	135	6	160	301
Teacher	19	0	15	34
Professional	11	0	12	23
Office worker	24	8	32	64
Skilled laborer	25	11	13	49
Unskilled laborer	93	157	26	276
Proprietor	28	2	28	58
Salesman or saleslady	23	4	10	37
Students and athletes	22	0	3	25
Telephone or switchboard	5	2	2	9
Waitress	7	3	12	22
Minister	5	0	3	8
Retired proprietor and rancher	5	0	7	12
Police department and game ranger	1	2	1	4
Total	458	197	345	1000

TABLE 4

TABLE V

SUMMARY OF FINDINGS OBTAINED FROM STUDY OF EFFECTS OF TRAUMA ON TWENTY HINDU PORTERS*

No.	Name	Age	Sex	Type of Work	No. Yrs. Working	Gross Diet	Is Food Adequate?	Symptoms Referable to Spine	Radiographs
1.	Kailash Singh	25	M	Carrying loads on head	10	Mainly CHO-rice & wheat	No	No	Minimal degenerative changes C5-6
2.	Latu Ram	45	M	”	15	”	”	”	Negative
3.	Budhu Singh	60	M	”	15	”	”	”	Mod. advanced degen. changes of entire cerv. spine. Normal curve.
4.	Mahaliu Singh	35	M	”	6	”	”	”	Minimal degen. changes between C4-5. Loss of normal cerv. curve.
5.	Dukham Cope	40	M	”	10	”	”	”	Negative
6.	Maleki Ram	60	M	”	15	”	”	”	Negative
7.	Rangai	65	M	”	6	”	”	”	Negative
8.	Ramkissau Lal	26	M	”	2	”	”	”	Negative
9.	Bhiku Lal	40	M	”	6	”	”	”	Negative
10.	Mehunu	40	M	”	7	”	”	”	Negative
11.	Bhola Mahato	35	M	”	5	”	”	”	Negative
12.	Navayams	25	M	”	1	”	”	”	Loss of cerv. curve at level of 6th cervical
13.	Kuber	35	M	”	6	”	”	”	Negative
14.	Kalu Ram	50	M	”	12	”	”	”	Mod. degen. changes of C6-7; mod. loss of normal curve
15.	Multani	40	M	”	15	”	”	”	Negative
16.	Balchand	20	M	”	16	”	”	”	Minimal degen. changes C6-7, Tl. Loss normal curve at C6.
17.	Bharaba	50	M	”	10	”	”	”	Fusion between C2-3 with compl. loss of interspace & fusion of spinous processes
18.	Lalit Mohon Bisauas	22	M	”	6	”	”	”	Negative
19.	Jogodish Singh	30	M	”	3	”	”	”	Negative
20.	Basu	25	M	”	4	”	”	”	Negative

(Symptoms referable to spine include complaints in neck, neck pain, headache, shoulder-arm pain, and stiffness of shoulder.)

*Information in this table obtained through the cooperation of Sailendra Bhattacharyya, M.D., Orthopedist, Calcutta, India.

spine. This phase in the management of back strain is covered in the manual, Care of the Back.[1]

One of the most important factors to be corrected in the patient who has complaints referable to the spine is any mechanical weakness which might predispose the back to fatigue. One partially accomplishes this by correcting any deficiency or metabolic disorder involving the musculoskeletal system. The most difficult phase to control, however, is weakness from disuse. As pointed out before, the patient who is likely to have back complaints is the person who lacks in general strength and exercises improperly. Consequently, remedial exercise becomes a very important part of this treatment. Paul Williams[2,3] has outlined a series of exercises which have proved to be of great value in the simple stress and degenerative lesions. Essentially, these exercises develop the abdominal musculature and the anterior supporting structures of the lower spine. Equally important is general outdoor exercise to maintain good body tone. Such exercise also improves the patient's general mental outlook by offering a form of relaxation and rest, so often neglected in our attempt to excel at less physical pursuits.

Occasionally, braces, corsets or supports are necessary for patients with the more severe mechanical problems. Surgical intervention is indicated in others. Most are helped, at least to a degree, by such physical therapy measures as heat, massage, liniments, and rubefacients, many of which can be carried out at home. The use of the contour pillow in cervical strains,[4] traction and physical therapy modalities are indicated for others.

Summary

Each patient with spinal complaints must be evaluated from the standpoint of the importance of three factors contributing to his pain—the organic lesion, postural or mechanical strain, and psychomotor phenomena. Efforts to correct abnormalities of these three factors usually result in significant improvement of the patient.

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Reversible Depression and Parkinsonian Occurring During TREATMENT *of* HYPERTENSION *with Rauwolfia*

HAROLD H. JONES, JR., M.D.

Depression[1] and Parkinsonian syndromes[2,3] have been reported as occurring during the treatment of patients with Rauwolfia Alkaloids. They have occurred on rather high dosage as reported. The following is a case report of the simultaneous development of depression and a parkinsonian syndrome in a patient being treated for essential hypertension with whole root Rauwolfia Serpentina in a commonly used dosage.

A 60 year old white woman was referred by an ophthalmologist because of a grade 3 hypertensive retinopathy on Dec. 8, 1954. Her chief complaint was pain in and around the left eye. She had consulted several physicians and had been given eye drops without relief. She had known that she had

THE AUTHOR

Harold H. Jones, M.D., Ponca City, was graduated from the University of Kansas in 1943. He served in the U. S. Navy from 1943-46 and from 1947 to 1950 served a research fellowship and residency under the Department of Internal Medicine, University of Kansas. He has practiced in Ponca City for about a year.

hypertension since 1945 and had been under the care of physicians since then. She did not know what medications she had received, but said that her pressure was usually around 200. During the past year, she noted an oppressive feeling in the chest, particularly on exertion. Her weight varied around 180 pounds, + — 5. She had never been on salt restriction. She had had four pregnancies without obstetrical difficulty. The menopause occurred without incident when she was 45. A system review elicited no further significant information. The patient's family history was positive for carcinoma of the bowel and strokes.

The initial physical examination revealed a mesomorphic female in her late sixth decade of life who appeared to be in discomfort. The eye grounds presented hypertensive retinopathy. The head and neck were otherwise normal. The lungs were clear to auscultation. The heart sounds were not remarkable. There was no increase in cardiac dullness. The blood pressure was 210/120, the pulse was 80 and regular. The abdomen was free of masses and tenderness. Pelvic examination revealed no abnormalities of the pelvic viscera. The rectum was without abnormality. The extremities presented normal color and pulses; the reflexes were physiologic.

An ECG revealed a sinus mechanism, rate 80, P-R interval 0.24sec., QRS 0.08sec., electrical axis 30 degrees, intrinsicoid deflection 0.04 in V5. A urinary concentration test revealed the maximum specific gravity to be 1.015 after 18 hours of fluid restriction. The urine was otherwise normal.

The progress of the case after the initial examination was as follows: The patient was placed on a 1000 calorie, low salt diet with Raudixin (R) 100 mg. b.i.d. Within one week she was free of ocular pain and her blood pressure was 160/95. Her condition was static until April 7, 1955 when she began to complain of nausea. At that time her blood pressure had risen to 200/110 and she had not lost weight. Her medications then included Raudixin 100 mg. t.i.d., Thorazine (R) 20 mg. t.i.d., and Ansolysen (R) 40 mg. t.i.d. On May 2, 1955 the patient's pressure was 160/100. She had a dull apathetic expression.

Her husband was concerned about her mood and asked about taking her on a vacation. On June 2, 1955 the patient returned from a vacation in Colorado. She had developed a full blown parkinsonism with marked nodding tremor of the head, drooling, and pill-rolling tremor of both hands. Her expression and gait were typical of the syndrome. Raudixin was discontinued. One week after stopping Raudixin the parkinsonism was much improved, but tremor of the chin and right hand persisted. Her face had become animate again. There was a distinct change in her mood and it was obvious, in retrospect, that she had been extremely depressed during the past month. Her blood pressure was 160/100. Thorazine and Ansolysen were continued. Some residual non-intention tremor was noted in the patient's chin and right arm when she was last seen on July 21, 1955. Her blood pressure was 160/100 and her eye grounds were much improved.

SUMMARY

A rather profound depression and parkinsonian syndrome occurred in a patient receiving whole root Rauwolfia Serpentina in a commonly used dosage. Slow reversal of these symptoms followed the withdrawal of the drug. Some non-intention tremor was still evident five months later.

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A.M.A. INTERIM SESSION

November 29 — December 2 — Boston

Association Activities

PRESIDENT'S LETTER

At the first annual meeting of the School Executives of Oklahoma in Norman September 30, many school problems were discussed. Among these problems the one of most interest to the medical profession and, incidentally, of most concern to the school administrators, is that of "The relation of the practicing physician to the school health program."

That the physicians in both small and large communities are reticent concerning school health measures there could be no doubt after the poignant discussion of this relationship by both physicians and administrators. However, all was not unfavorable. It was pointed out that in one of the larger communities a doctor who had done little civicwise and who had shown even less interest in school health, when approached by the school administrator and asked his opinion and guidance in a school health program had in a relatively short time become a regular "Fireball" in organizing and supervising the program.

Out of the thought provoking discussions came many constructive ideas concerning school health-physician relationships. For the most part these ideas channeled and crystalized into two categories, namely that most physicians are not reticent regarding school health matters if their opinions and services are sought by proper authorities and that proper counsel would be had only from a committee, council, or board composed of parent representatives from the various community vocations, school organizations, etc. This would include teachers, physicians, laborers, bankers, P-TA members, et al. In this way the physician could best serve his school community healthwise and his profession organizationalwise.

It is hoped and requested by your president that if this program is adopted and put into operation by the authorities interested in school health that every physician asked to participate will give of his best in this program.

R. Q. Goodwin

President

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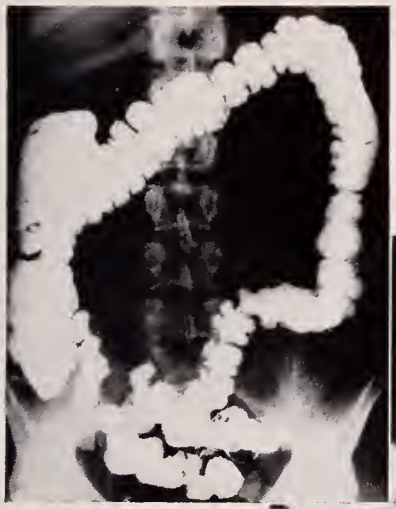

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Deaths

JAMES STEVENSON, M.D.

1893-1955

Dr. James Stevenson was born in Chicago, Illinois, in 1893. His father and mother were natives of Scotland who emigrated to the United States shortly after their marriage. By dent of Scotch initiative the senior Mr. Stevenson became a successful small business man in the strange new land. His children were raised in a happy home with an appreciation for God and the church, music, literature, good manners, and the rewards of hard work.

Medicine held an early appeal for James Stevenson. As a boy he puttered around with a microscope purchased second hand from nickels and dimes earned by odd jobs. Science, biology and chemistry were favorite high school subjects, and his path led naturally to the University of Illinois School of Medicine, where he enrolled in 1913. Afterhour work paid for much of his tuition and other expenses; he drove a recalcitrant mule for a Chicago grocer, washed dishes and waited tables in dormitories, and helped out in a chemistry lab. At the Chicago Opera House he carried a spear in the triumphal return from Egypt in *Aida*, a pleasant job lost when his spear protruded inopportunely into the ample backside of a visiting soporano. When money was scarce, a nearby saloon provided a tasty free lunch with each stein of nickel beer. Despite the hardship of working and going to school, it was an enjoyable experience for the young doctor to be.

Graduation from medical school in June, 1917, found the nation at war with Germany. Already in uniform as a medical student reservist, Dr. Stevenson was assigned by the Army Medical Corps to complete his internship at Cook County Hospital of Chicago.

With World War I over, Dr. Stevenson began to look around for a suitable place to practice. Uncertain about specializing he decided to enter general practice in a small town. A professional friend had suggested the Southwest, and early in 1920 he visited in Texas and Oklahoma scouting possible locations. He selected Cherokee, a small town in Oklahoma of about 2,000 population at the time.

General practice proved to be an enjoyable experience for Dr. Stevenson. There were babies to be delivered, broken bones to be set, and sick children to be cured plus all of a hundred assorted ailments to be seen in the course of a few days. With his bride, the former Nell Farrell, he settled down in a small frame house. Dr. Stevenson always recalled his days at Cherokee with the greatest of pleasure; it was a golden era in discovering the first rich personal satisfactions of medical practice. Years later, when he was an officer of the Oklahoma State Medical Association, he was delighted when a strange woman came up to him on the street and cried, "Why, Dr. Stevenson, we he had a baby together at Cherokee." It was his first obstetrical patient.

Dermatology had interested Dr. Stevenson since his medical school days. After nearly five years at Cherokee, he made the important decision of sacrificing his going general practice to specialize in dermatology in a larger city. The family, now augmented by a baby son, packed up and said their good-bye to Cherokee. Dr. Stevenson had selected Harvard Medical School to take special postgraduate training in dermatology, and for the next year he busied himself at Boston hospitals and clinics, studying the nature and treatment of the skin. In 1925 he located in Tulsa as a specialist in dermatology.

Throughout his lifetime Dr. Stevenson was to be a strong advocate of several years of general practice as a prerequisite for specialty practice. In an address before the Tulsa Academy of General Practice shortly after its formation he described the benefits of his years at Cherokee in preparing him for the more exacting requirements of a specialty.

In Tulsa Dr. Jim, as he was affectionately known, soon became a popular figure with both patients and professional friends. His pleasant personality, heightened by a friendly bass voice, was leavened with a delightful sense of humor. His patients found in him a ready confidence, his acquaintances a sense of friendship.

Organized medicine had interested Dr. Stevenson since his earliest days at Cherokee, where he had served a term as President of the small Alfalfa County Medical Society. In Tulsa he soon became a ready worker in affairs of the Tulsa County Medical Society and later, the Oklahoma State Medical Association. He was also prominent in affairs of St. John's Hospital, of which he would eventually become Chief of Staff. Civic affairs also interested him and he served on many committees of the Tulsa Chamber of Commerce and the Rotary Club of Tulsa.

The world wide economic depression which began in 1929 brought to medicine new problems. The first serious threats of socialized medicine were heard as an impoverished population found the costs of medical and hospital care a frequently serious problem. Then serving as a Trustee of the Tulsa County Medical Society, Dr. James Stevenson grew increasingly concerned with a new plethora of professional problems. He became an ardent student of medical economics and the sociological problems of the medical profession, interests which remained with him until his death.

Beginning in the early 30's Dr. Stevenson had advocated the employment of a full-time Executive Secretary for both the Oklahoma State Medical Association and the Tulsa County Medical Society. As a member of the Council to the State Association he led the fight for creation of the state executive offices. It was an uphill battle in many respects; most physicians were unaware of the potential value of such an office, while others resented the additional dues necessary to finance it. By dent of constant persuasion and with the support of several other Council members, Dr. Stevenson pushed through the authorization for the employment of an Executive Secretary at the House of Delegates meeting of 1937. The following year the dream became a reality with the employment of a young Kansan, Dick Graham, as Executice Secretary.

In Tulsa Dr. Stevenson led a similar fight. His election to the Presidency of the Tulsa County Medical Society in 1937 gave him an opportunity to push the project. With the aid of Dr. Maurice J. Searle, Dr. Walter S. Larrabee, and the late Dr. A. W. Pigford, he prepared a blueprint for the operation of an Executive Office for the Tulsa County Medical Society. To pave the way, he moved the Society into attractive quarters on the 12th floor of the Medical Arts Building, giving the organization a central office and home for its Library for the first time. This was accomplished in April, 1937, with the Society raising dues to meet the incidental expenses of the office; earlier, Dr. Stevenson had succeeded in obtaining the space rent-free from the management of the Medical Arts Building.

To bring the Executive Secretary project in Tulsa County to a head Dr. Stevenson invited doctors of Wichita, Kansas, and their Executive Secretary, the late Jack Austin, to Tulsa to acquaint Tulsa doctors with the manner in which the project had operated for the Sedgwick County Medical Society. The enthusiastic group added the final note of conviction, and in November, 1937, at the end of Dr. Stevenson's term of office, the Tulsa County Medical Society formally authorized the employment of an Executive Secretary. This was done early the following year.

Dr. Stevenson proved to be an invaluable friend and advisor to the Executive Secretaries of the State and County societies through the year. Although he loved to tease them about "creating situations and maintaining tension," he was a constant supporter of the idea of employing lay personnel to assist in administering useful programs of activity. As a result of his interest, the Oklahoma State Medical Association and the Tulsa County Medical Society became pioneers in the Executive Secretary idea; from approximately 25 Executive Secretaries in 1937, when Dr. Stevenson successfully completed the project in Oklahoma, the number has grown to nearly 300 today.

In addition to moving the Tulsa County Medical Society into its own office and con-

solidating its Library into a central location, as well as creating the office of an Executive Secretary, Dr. Stevenson did much other fine work during his year as President in 1937. He was instrumental in the establishment of the Tulsa Cooperative Clinic, a central clinic for treatment of venereal diseases which remained in operation until the advent of wonder drugs eliminated its need. Dr. Stevenson's administration also supported the Annual Reregistration Act which was first introduced into the Legislative in 1937 (although it did not pass until later). Another project was a study of the decentralization of Oklahoma University School of Medicine. Late in the year the unfortunate sale of a harmful preparation of sulfanilamide resulted in several deaths in Tulsa County; acting quickly Dr. Stevenson was able to have the preparations removed from druggists' shelves and calmed the populace by a positive publicity program. For this competent work *The Tulsa World* commended the Society in a lengthy editorial.

Beginning in the early thirties the Blue Cross Plans of non-profit hospital insurance, developed and directed by organized medicine, attracted Dr. Stevenson's attention. He saw in them an answer to the problem of growing hospital costs. For several years he made a careful study of the operation of such plans and became convinced a Blue Cross Plan was practical for Oklahoma. In the beginning he stood virtually alone in supporting the project; the idea was stoutly opposed by both physicians and hospitals who feared such a Plan would impose new controls on them. Freed of his responsibilities as President of the Tulsa County Medical Society, Dr. Stevenson entered energetically into the project. He made several visits to St. Louis where Dr. Carl Vohs, President of the Missouri Blue Cross, gave him invaluable assistance. Early in 1939 Dr. Stevenson persuaded the Council of the Oklahoma State Medical Association to attend a lengthy briefing session featuring Dr. Vohs and Mr. Ray McCarthy, Executive Director of the Missouri Plan. Although still conservative in its approach, the Association greenlighted the project.

For more than a full year Dr. Stevenson and two or three others notably Dr. Henry H. Turner of Oklahoma City worked incessantly to bring Blue Cross into being. To the neglect of his practice, he made twice-weekly trips to Oklahoma City over the hazardous narrow highway, often returning home well after midnight. With Dr. Turner and others he travelled from one end of Oklahoma to the other, calling on doctors and hospital administrators. Lengthy sessions with an Oklahoma City attorney employed to handle the legal details of the Plan occupied several weeks. At last, in March of 1940, the first meeting of the Blue Cross Plan of Oklahoma's Board of Directors was held. To everyone's surprise, Dr. Stevenson refused to serve on the Board, fearful that critics might ascribe a personal motive to his efforts to create the Plan. It was typical of him.

The Blue Cross Plan of Oklahoma opened its doors in April, 1940, with Mr. W. R. McBee, a former assistant in the Missouri Blue Cross Plan, as Director. Mr. McBee was to describe later the invaluable advice and assistance which Dr. Stevenson gave him during the first few years. "Mrs. Stevenson complained that I saw more of her husband than she did." McBee said. Among Dr. Stevenson's tasks had been the raising of $10,000 to equip the tiny Blue Cross office in the Hunt Building in Tulsa. This had been done by buttonholing two dozen physicians and lay persons for contributions of $100 to $1,000. These sums were eventually repaid with interest.

Dr. Stevenson is generally credited with having brought about the creation of Blue Cross more or less by himself. In 1944 he took an active part in the creation of the Blue Shield Plan of Oklahoma, a companion program of surgical and obstetrical care benefits. The Blue Shield Plan, originally advanced as a service contact, was finally created on an indemnity basis. Again, Dr. Stevenson played an important part in encouraging the Oklahoma State Medical Association's House of Delegates to accept the substitute plan. Dr. Stevenson this time accepted a position on the Board of Directors and served as Secretary-Treasurer of the organization to the time of his death. He was also a district representative to the National

Blue Shield organization and attained a wide reputation for his services to that group.

Dr. Stevenson was in many respects a trouble-shooter for Blue Cross and Blue Shield. The great fundamental moral honesty which marked his character was challenged by some of the abuses perpetrated on the two Plans by a few physicians. He did not hesitate to visit them in person and discuss frankly with them the use of offense; it is to his credit that he never allowed personal friendships to affect his judgment on such matters. And it is a tribute to his reputation that the offenders never harbored any resentment against him.

In 1943 Dr. Stevenson assumed the Presidency of the Oklahoma State Medical Association and gave the organization one of its finest years. Beset by the problems of World War II, the Association was operating under many wartime handicaps. With the Executive Secretary in military service, Dr. Stevenson took personal direction of the Executive Offices; after a long day in his crowded office, swollen by the shortage of physicians, Dr. Stevenson would make the long trip to Oklahoma City several times a week to transact Association business.

As President, Dr. Stevenson was faced with the administration of a Military Affairs program which had wide latitude in the calling of physicians to military service. In its official advisory role to the Office of Procurement and Assignment, the Association devoted nearly half of its time to such matters. The introduction of the Wagner-Murray-Dingell Bill for a system of federal compulsory health insurance, the first of several such bills, threw the Association into the bitter nationwide fight to defeat the measure in Congress. Dr. Stevenson found himself a frequent speaker before groups large and small over the State as he attempted to point out the dangers of state medicine.

Other portions of his year of activity included the creation of a Post-War Planning Committee, designed to anticipate problems of the returning service doctor; the first of the annual Secretaries Conferences to keep county medical society officers abreast of state and national developments; and the beginnings of a legislative campaign which

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DELTRA® tablets

(Prednisone, Merck)

5 mg. - 2.5 mg. - 1 mg. (scored)

the delta-1 analogue of cortisone

Indications:

Rheumatoid arthritis

Bronchial asthma

Inflammatory skin conditions

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eventually led to the creation of the Oklahoma State Board of Health.

At the same time as he ended his year as President of the Oklahoma State Medical Association, Dr. Stevenson entered into a new phase of his career in organized medicine. He was elected Alternate Delegate to the American Medical Association. Two years later he became Delegate, a post in which he served with distinction until his death.

From the beginning of his entrance into American Medical Association affairs, Dr. Stevenson made no secret of his view that a change in AMA policies and personnel was desirable. With a group of other young delegates, small at first but rapidly growing as the months rolled by, Dr. Stevenson formed a bloc in the House of Delegates to unseat the AMA Old Guard. These efforts soon proved fruitful when delegates approved an entirely new policy code, replaced veteran officials with new blood, and embarked on a much needed public relations program.

In 1951 Dr. Stevenson was named a member of the Council on Constitution and By-Laws, a position he held until his resignation a few weeks before his death. Widely respected in the AMA House of Delegates for his liberal views, he was instrumental in knitting together delegates from the less populated states to form a useful voting bloc. This group joined with other delegates in promoting an aggressive campaign against the state medicine proposals of 1950-51 and in the establishment of an extensive public relations department in the AMA. Shortly before his final illness Dr. Stevenson was being seriously considered for more important roles in AMA circles.

Except for golf, which he enjoyed very much, Dr. Stevenson seldom took time from his professional interests for recreation. As a close professional friend has said, "Dr. Jim's hobby was the betterment of the medical profession. It gave him more pleasure and relaxation to work in such activities than any form of recreation could have done." Except to attend the AMA and other meetings, Dr. Stevenson seldom took a vacation. Occasionally he would fly to Chicago for a weekend to see his mother, who was to outlive him.

In the few moments which he had for himself, Dr. Stevenson liked to enjoy music. He was a talented violinist in his younger days and greatly enjoyed philharmonic orchestras, concerts and the opera. Books offered pleasure and he frequently would reread old favorites, Rostand's *Cyrano de Bergerac* being a particular favorite.

An intervertebral disc gave Dr. Stevenson some difficulty about five years ago, but he recovered after an operation and seemed to be in perfect health until early in 1954. At the AMA House of Delegates at San Francisco in June of that year, Dr. Stevenson appeared to be suffering, and friends were concerned about his condition. Shortly after his return home cancer of the mouth was diagnosed. An operation was performed, removing neck glands and most of the lower mandible. The malignancy recurred again in a few months, necessitating a second operation, and by mid-1955 had spread to other parts of the body. He died quietly at his Tulsa home on September 11, 1955, closing a lifetime of service to the medical profession.

An editorial commemorating his death observed that "Dr. James Stevenson will not be easily replaced in the pattern of American Medicine . . . Oklahoma Medicine, as well as doctors over the nation, are indebted for what he did to better the medical profession and to keep it free on a high moral plane. If we failed, unthinkingly, to express our deep obligation to him during his lifetime. let us now in the sorrow of his death acknowledge the great debt we owe him."

Deaths

John Paine Torrey, M.D.
1870-1955

John Paine Torrey, M.D., Bartlesville physician since 1920, died October 1 after a long illness.

Doctor Torrey was born at Andover, Mass., May 13, 1870. He was a graduate of Phillips Academy of the Harvard School of Medicine. He came to Oklahoma in 1900 where his father was a Congregational missionary among the Cherokee Indians. Doctor Torrey was instructor at the Oklahoma School of Medicine for five years and was professor of anatomy there for 15 years before moving to Bartlesville. He retired from active practice in 1945. He was a Life Member of the Oklahoma State Medical Association and had received a 50 Year Pin.

He was a veteran of the Spanish American War and World War I, a member of the Presbyterian church, Masonic Lodge, and was prominent in a national philatelic society.

Clarence S. Petty, M.D.
1871-1955

Clarence S. Petty, M.D., pioneer Guthrie physician, died September 25 following a long illness.

Doctor Petty was born November 11, 1871 at Gadsden, Ala. and came to Guthrie to establish his medical practice in May, 1897. He retired from active practice in 1951. He had received a 50 Year Pin and was a Life Member of the Oklahoma State Medical Association. He was the father of James S. Petty, M.D., Guthrie.

A. L. Dougan, M.D.
1869-1955

A. L. Dougan, M.D., Carmen, died September 29, 1955. At the time of his death he was living with a daughter in Grand Junction, Colo. A Life Member of the Oklahoma State Medical Association, he had also received a 50 Year Pin. He was the father of A. F. Dougan, M.D. of Enid.

(Continued on Page 406)

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1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets
(PREDNISOLONE, MERCK)
2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

Indications: *Rheumatoid arthritis*
Bronchial asthma
Inflammatory skin conditions

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Named To Physician Relations Post With Blue Cross-Blue Shield

The appointment of Carl E. Behle as Physician Relations Supervisor for the Oklahoma Blue Cross and Blue Shield has been announced by N. D. Helland, Executive Director.

He was formerly Assistant Public Relations Manager and Editor of the Plans' monthly publication *Hospitality*.

"The appointment has been made so that we may better serve the Physicians of Oklahoma with information and assistance on subjects relating to the Blue Cross and Blue Shield Plans," Helland said.

Miss Velma Neely, who has been Supervisor of Physician and Hospital Relations, will not devote full time to Hospital Relations.

Behle is a graduate of Temple University in Philadelphia. Prior to his employment with Blue Cross and Blue Shield he had been associated with The Wall Street Journal, Tulsa Television Station KOTV and Travelers Insurance Company. He is married and has two children.

Physicians Invited To Los Angeles Meeting

A well-rounded program emphasizing coordinated discussions on major developments in many phases of medical science will be an important feature of the Los Angeles Midwinter Medical Convention, January 3, 4 and 5, 1956, according to Doctor Ewing L. Turner, LACMA President.

Conceived to commemorate the 85th Anniversary of the Association, the Convention will offer a number of innovations which should be of interest to physicians everywhere, Doctor Turner said.

Instead of the usual series of individual papers on a number of unrelated subjects, the Convention program has been planned to coordinate the newest and most significant information in six major fields of medicine, he said.

The program is organized into sections in which prominent medical authorities and lecturers will lead panel discussions.

CARL E. BEHLE

Diabetes Week, November 13-19

Hugh Jeter, M.D., Chairman of the Diabetes Detection and Education Committee, has issued the following announcement concerning Diabetes Week:

One of the great triumphs of medical science within the past generation has been the discovery of methods of controlling diabetes. Today over a million in this country are under medical care for this debilitating ailment and are helped by their physicians to manage their own illness so that most of them can lead normal and useful lives. Unfortunately, many diabetics are not being treated today because they are not even known to have the ailment. The symptoms of diabetes may not yet be acute enough to make these individuals go to a doctor, but without treatment, the condition may suddenly become very severe. It is estimated that there are nearly as many undiscovered diabetics in this country as there are known cases. The search for these unknown diabetics is one of the major tasks of modern medicine.

The American Diabetes Association, a national organization composed mainly of physicians, has set itself to the task of conducting this search for the undiagnosed diabetics. To carry out its mission, the association has organized a continuing diabetes detection drive which is spearheaded every year by Diabetes Week which is the third week in November.

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Physicians Participate In State Bar Institute

Two Oklahoma City physicians appeared recently on the program of the Boiling Springs Institute, an institute sponsored by the Oklahoma Bar Association. This conference was held September 13, at the Boiling Springs State park near Woodward.

The afternoon session of the program was devoted to discussions of medico-legal problems in the light of promoting a more harmonious relationship between the two professions.

W. F. Keller, M.D., spoke on "The Physician's Role in the Administration of Justice."

Doctor Keller was particularly concerned about the great number of deaths in the United States which occur under unusual circumstances and go unreported. He believes that many physicians are hesitant to report cases which appear suspicious, primarily due to their reluctance to become involved in court proceedings.

"One solution to the problem," Doctor Keller pointed out, "would be the designation of a well-qualified physician who would act in the capacity of a coroner or medical examiner and would sign all death certificates of people who die under suspicious or unusual circumstances." By doing this, the private physician would be relieved of the responsibility of appearing in court and would be less reluctant to report borderline cases where his findings are not concrete."

"Under this system," he continued, "the designated physician would also be of invaluable assistance to law enforcement officers in the identification of dismembered, burned or mutilated bodies."

W. K. West, M.D., appeared with attorney Robert Looney, also of Oklahoma City, in a discussion of "Reciprocal Professional Courtesies." Doctor West spoke highly of the relationship between the two professions.

"I do not believe there is any great discord between the two professions," Doctor West said. He feels that most attorneys are very considerate in keeping a subpoenaed doctor informed in regard to his appearance in court. "The conflict between the court room and the physician's schedule seems to be the greatest problem and source of ill feelings," he continued.

Mr. Looney made an appeal to both physicians and attorneys to make a conscientious effort to cooperate with each other on a more friendly basis. He also announced that the Oklahoma Bar Association will discuss a proposed joint committee for the betterment of relations between the two professions at their next state meeting.

In addition to the lawyers from nearby communities, the following physicians were present R. G. Obermiller, M.D., Woodward; Davis T. Hunt, M.D., Mooreland; Richard H. Burgtorf, MD.,. Shattuck; and M. H. Newman, M.D., Shattuck.

Seminar on Anemias Offered at Muskogee

A seminar on anemias sponsored jointly by the East Central Oklahoma Medical Society and the Veterans Administration Hospital staff at Muskogee will be held at Muskogee December 3.

Speakers will be Robert M. Bird, M.D., Associate Professor, Department of Medicine, University of Oklahoma School of Medicine; Carl A. Moyer, M.D., Chief of Surgery, Washington University, St. Louis; James P. King, M.D., Department of Pediatrics, St. Louis University School of Medicine, St. Louis; and Stewart M. Wolf, M.D., Chairman, Department of Medicine, University of Oklahoma School of Medicine. The program is as follows:

2:00 p.m.-2:45 p.m.—"Anemias in Internal Medicine," Robert M. Bird, M.D.

2:45 p.m.-3:30 p.m.—"Anemias in Surgery," Carl A. Moyer, M.D.

3:45 p.m.-4:30 p.m.—"Anemias in Pediatrics," James P. King, M.D.

4:30 p.m.-5:30 p.m.—Panel Discussion.

All afternoon sessions will be in the Auditorium of the V. A. Hospital. Place to be announced later for the evening sessions.

7:00 p.m.-8:00 p.m.—Dinner.

8:00 p.m.—"Physiologic Effects of Placebos," Stewart Wolf, M.D.

Dinner reservations are $3.00 and must be made in advance with the program chairman, M. C. Gephardt, M.D., 443 N. 16th, Muskogee, Okla.

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Long-term study has now shown that the failure rate with BUTAZOLIDIN in rheumatoid arthritis, and particularly in rheumatoid spondylitis, is significantly lower than with hormonal therapy.[3]

(1) Payne, R. W.; Shetlar, M. R.; Farr, C. H.; Hellbaum, A. A., and Ishmael, W. K.: J. Lab. & Clin. Med. *45*:331, 1955. (2) Bunim, J. J.; Williams, R. R., and Black, R. L.: J. Chran. Dis. *1*:168, 1955. (3) Halbroak, W. P.: M. Clin. Narth America *39*:405, 1955.

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Receives Fifty Year Pin

Wilkie Hoover, M.D., Councilor, is shown (left) as he presents a gold 50-Year Club pin awarded by the Oklahoma State Medical Association to Harry Dale Murdock, M.D., (right), veteran Tulsa surgeon. The presentation was made at the September 12th meeting of the Tulsa County Medical Society at the Blue Cross-Blue Shield building auditorium.

Doctor Murdock entered practice in 1905 following his graduation from Rush Medical College of Chicago. He was a member of the staff of St. Luke's Hospital of Chicago in 1905-06, practiced at Brodhead, Wisconsin, from 1906 to 1910, and moved to Tulsa during the latter year. He was President of the Tulsa County Medical Society in 1918, was formerly a member of the Board or Directors of the Blue Cross Plan of Oklahoma and was formerly a member of the Tulsa City Board of Health. Doctor Murdock is still in active practice at the age of 76.

A. M. A. Nassau Tour

An Official Tour to Nassau for members of the American Medical Association has been arranged for December 2-10, immediately following the AMA Clinical Session in Boston.

By invitation from the Bahamas Medical Association a special medical meeting will be held at the Jungle Club in Nassau on Wednesday, December 7 for which a certificate of attendance will be issued.

Official tour folders, containing full information, may be secured by writing to AMA Nassau Tour Headquarters at 35 East Monroe Street, Chicago 3.

Councilor District Meeting

OSMA members and their wives from the Second Councilor District met in Stillwater September 15 for a dinner meeting. R. Q. Goodwin, M.D., OSMA President was the speaker.

OSMA Honors Students

The annual dinner for the Student American Medical Association was given by the Oklahoma State Medical Association at Beverly's Hide-a-Way in Oklahoma City September 23. Approximately 200 students from all classes at the medical school attended.

R. Q. Goodwin, M.D., President of the Oklahoma State Medical Association, was the speaker. E. F. Lester. M.D., represented the Board of Medical Examiners and several faculty advisors also attended. Paul Compton is president of the SAMA.

Neurosurgical Meeting

An all day postgraduate neurosurgical meeting in planned for December 8 at the Auditorium of the University of Oklahoma School of Medicine.

Guest speakers will be Ed Fincher, M.D., chief of neurosurgery, Emory University, Atlanta, Georgia; and Leonard Furlow, M.D., associate professor of clinical neurosurgery, Washington University School of Medicine, St. Louis, Mo. Approximately 12 other prominent neurosurgeons from the midwest will also appear on the program.

Registration is $5.00 and all members of the OSMA are invited to attend.

The organisms commonly involved in

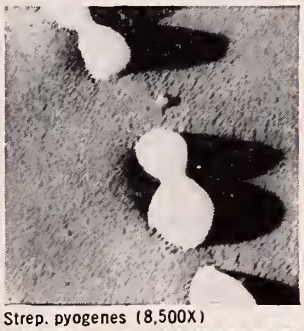
Pyelitis

E. coli (8,000X)

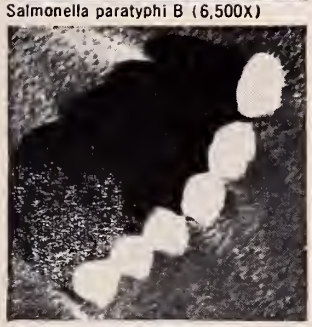
Aerobacter aerogenes (12,500X)

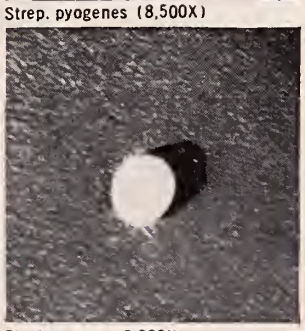
Salmonella paratyphi A (8,000X)

Salmonella paratyphi B (6,500X)


Strep. pyogenes (8,500X)

Strep. faecalis (10,000X)


Strep. viridans (9,000X)


Staph. aureus (9,000X)

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Book Reviews

POMP AND PESTILENCE. Infectious Disease, its Origins and Conquest. Ronald Hare, M.D., Professor of Bacteriology, London University. Published by Philosophical Library, New York. 1955. Price $5.75.

In this 200 page volume Doctor Hare, Professor of Bacteriology in the University of London at St. Thomas' Hospital Medical School, outlines the story of parasites and their effect on man from their probable origins as human tenants to the present day. Not a history of medicine in the usual sense, it is a brief but forceful documentary suitable for the the layman and those of the medical profession. After a rather pedantic beginning some provocative questions are asked and some conservative but rousing answers given. Did man rise from a simian ancestor completely equipped with his modern parasites? If so, he was loaded. In fact, he probably could not have survived let alone arise. Early men were few and far between. Modern human parasites like the hemolytic streptococcus would have died out without the chance to spread in a community of men. Did our parasites originate in animals? Was the Black Death of Medieval Europe the result of a switch by the plague bacillus from animal to human host? With an economy of words the author depicts the tremendous effects of the lowly parasite on human history from the time man first learned to grow his own food and settle in one spot to the crowding of the human herd in cities ideal for the propagation of parasites, and, finally, man's partial success in controlling the situation. The long look back at what parasites can do makes good reading, and the warning against complacency in the future, antibiotics not withstanding, is timely.—F. C. Kelly, Ph.D.

OPEN WIDER PLEASE. J. Stanley Clark. University of Oklahoma Press, Norman. 391 pages. $5.00.

Seven years ago a special historical committee was appointed by the Oklahoma State Dental Association under the chairmanship of Dr. Harry Sorrels. The result of its work was released by the University of Oklahoma Press in April of 1955, and presents a timely addition to professional journalism. It depicts the effort of a profession to meet the health needs of its people.

The author, J. Stanley Clark, Ph.D., has commendably correlated the evolution of dentistry with the social and political evolution of our state, and the book should be of interest to all in the healing arts.

The book is divided into 11 chapters, profusely illustrated, plus an exhaustive appendix, in which all state boards, officers, licensees, and honorees, are listed. It is a veritable bible of dentistry in Oklahoma since the first dentist opened an ofice in 1885.

The story of the legal regulation is especially well told. The first such regulation was by the Oklahoma Territorial Legislature in 1891.

A highlight of professional dental education was the well known way of graduate instruction for the membership. The Association brought into the state the faculties of well known schools to spend a week of seminar training. This attracted national recognition during the decade after statehood.

In interviews with older members of the profession in the state many innovations in dental practice are related; namely, electrically driven motors, radiographic aids to diagnosis, dental castings, conductive anesthesia and other developments in the dental arts and sciences.

Dentistry's evolution as an allied agency of health along with medicine, pharmacy and the nursing profession is given proper recognition.

(Continued on Page 404)

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KNOX Protein Previews

New Study Shows Gelatine Restores Brittle Fingernails to Normal

Directions for making the Knox Gelatine drink in every package

Brittle, fragile or laminating fingernails are the bane of many a woman's existence. Yet this highly prevalent and distressing condition often has gone uncontrolled for lack of effective therapy. Now, you can promise these patients substantial relief in a large percentage of cases.

In a recent study[1] that confirmed previous work[2] Knox Gelatine was used to treat 36 women with fragile, brittle, laminating fingernails. The response was most gratifying. Except for three patients who discontinued the therapy, three diabetics, and two women who had congenital deformities, the splitting ceased and all other patients were able to manicure their nails to a full point by the time the study ended.

Optimal dosage proved to be one envelope (7 grams) of Knox Gelatine administered daily for three months. Improvement, however, was noted after the first month. If you would like more complete details of this work, just use the coupon.

1. Rosenberg, S. and Oster, K. A., "Gelatine in the Treatment of Brittle Nails," *Conn. State Med. J.* 19:171-179, March 1955.
2. Tyson, T. L., *J. Invest. Dermat.* 14:323, May 1950.

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ou probably know every answer!)

. Which is today's most widely prescribed broad-spectrum antibiotic?

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. What are some of the advantages of ACHROMYCIN?

A. Wide spectrum of effectiveness.
Rapid diffusion and penetration.
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. Exactly how broad is the spectrum of ACHROMYCIN?

A. It has proved effective against a wide variety of infections, caused by Gram-positive and Gram-negative bacteria, rickettsia, and certain viruses and protozoa.

. In what way are ACHROMYCIN Capsules advantageous?

A. For rapid and complete absorption they are dry-filled, sealed capsules (a Lederle exclusive!) No oils, no paste...tamperproof.

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A. It is produced — every gram — under rigid quality control in Lederle's own laboratories and is available only under the Lederle label.

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Clinical Session To Be in Boston

This year's American Medical Association clinical meeting in Boston Nov. 29 through Dec. 2 is expected to be the largest ever held, the AMA has announced.

The postgraduate meeting, aimed at helping to solve the daily practice problems of the family physician, is expected to be attended by some 4,000 persons, a large increase over last year's meeting. About 200 scientific papers and exhibits have been scheduled for presentation, according to Dr. Thomas G. Hull, secretary of the AMA's Council on Scientific Assembly.

Meetings will be held in Mechanics Hall and at the Statler Hotel where the House of Delegates, the AMA's policy-making body, will hold sessions. Papers will be given in three lecture halls, offering the physician a wide variety of choice in subjects.

This ninth clinical session has been planned with the cooperation of organized medicine throughout all the New England States. Area medical societies have relinquished many meetings this year in order to give more time to the clinical session. General chairman for the meeting is Dr. Frank P. Foster, and Dr. Theodore L. Badger is program chairman. Both are from Boston.

Turner Speaks At Meetings

Henry H. Turner, M.D., Oklahoma City, has addressed and will speak before several medical groups during the autumn months including the following:

Postgraduate assembly in endocrinology Sept. 26-Oct. 1, University of Indiana, where he delivered four papers on "Hypothyroidism—in Childhood and Adults," "Male Hypogonadism," "Male Climacteric — Imtence," and "Ovarian Hypofunction Syndromes including Female Eunuchoidism, Ovarian Aplasia, Turner's Syndrome." At the Washington, D. C. 25th annual assembly he spoke on "Some New Concepts of Thyroid Disfunction." On Sept. 26 he spoke before the staff of the Veterans Administration Medical Teaching Group Hospital in Memphis and he will act as moderator for the session on thyroid disease at the postgraduate program Nov. 8-9 sponsored by the University of Nebraska College of Medicine. He

will also give two papers. Nov. 9, he will speak before the Veterans Administration hospital staff in Lincoln on "Diagnosis and Medical Treatment of Hyperthyroidism" and at the Southern Medical in Houston he will present the paper "Iodine Induced Goiter in Children" for the joint meetings of medicine and pathology.

A. S. Risser, M.D., Honored

A. S. Risher, M.D., practicing physician in Blackwell for half a century, was honored at two different events recently.

On September 21 the medical staff of the Blackwell General Hospital and the Felician Sisters gave a dinner for Doctor Risser, who serves as president of the medical staff of the hospital. OSMA Executive Secretary Dick Graham was principal speaker and presented a 50 Year Pin to Doctor Risser. Several other gifts were presented.

September 28 was declared "Dr. A. S. Risser Day" in Blackwell by the mayor and Doctor Risser was honored at a program and tea at the First Presbyterian church.

Doctor Risser was born July 3, 1877 in Summerfield, Ill., graduated from Grinnell College in Iowa in 1900 and later taught at the Denmark Academy in Denmark, Iowa. He graduated from the Kansas City Medical College in 1905 and interned at St. Margaret's hospital in Kansas City and obtained his license to practice in Oklahoma on September 27, 1905. Doctor Risser formerly served as a lecturer in histology and pathology at the University of Oklahoma School of Medicine. In addition to other medical positions he has held, he serves as president of the Oklahoma Blue Cross plan.

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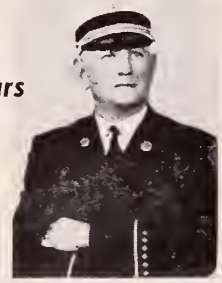
Age: 13 Months

Hanger Limbs are being successfully worn by amputees of all ages. David Canfield, just 13 months *(illustrated)*, is one of the many young children growing up on Hanger Legs. In contrast, Captain W. T. Traylor, over 75 *(illustrated)*, now wears his fifth Hanger. He is a fire inspector who must cover continually hospitals, schools, sports events, etc., and be on his feet far hours at a time.



Age: 78 Years

The success of Hanger Limbs with amputees of such widely varying types can be largely attributed to custom manufacture and individual fitting. Unusual conditions are carefully investigated by experienced fitters, and limbs are manufactured to meet individual requirements. The experience of Hanger's 90 years is given to every amputee so that his rehabilitation may be successful.

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PHYSICIAN PLACEMENT

The following physicians have expressed a desire to locate in Oklahoma. To the best of our knowledge, the names, addresses, qualifications and availability are current and accurate.

The asterisk beside some names indicates that additional information concerning the physician is available in this office.

Dermatology

Leonard D. Grayson, 1301 Cornaga Ave., Far Rockaway 91, N.Y. Age 34, medical school unknown (Grade A), Board Eligible in Dermatology, available immediately.

*John M. Knox, Dermatology Dept., University Hospital, Ann Arbor, Mich., age unknown, Baylor University 1949, Board eligible in Dermatology, veteran, available since February 1, 1955.

General Practice

*Ake Akerberg, Multragatan 20, Stockholm, NGBY, Sweden, age 38, University of Helsinki, Finland, available January, 1956.

*Charles Dail Davenport, 814 N. Elm, Hoisington, Kansas, age 30, University of Oklahoma School of Medicine, 1953, veteran, available July, 1956.

*John V. Hume, Wilmington General Hospital, Wilmington, Delaware, age 31, University of Colorado 1953, residency in general practice, veteran, availabilty unknown.

*William D. Stovall, Jr., Brodhead, Wisconsin, age 39, University of Wisconsin, 1944, veteran, available May 1, 1955.

*Andrew John Zumwalt, Cheyenne Agency, South Dakota, age 32, College of Medical Evangelists, 1949, on active duty with the P.H.S., available October 15, 1955.

Internal Medicine

*Marvin J. Colbert, Apt. 110, 809 S. Marshfield Ave., Chicago 12, Ill., age 31, University of Boston 1949, two and one-half years residency in internal medicine, veteran, available August 1, 1955.

*Robert Henry Frankenfeld, U. S. Naval Hospital, Quantico, Va., age 31, Cornell University 1947, Board eligible in Internal Medicine, active military duty, available October 1, 1955.

*C. A. Loughridge, 1107 E. Upsal St., Philadelphia 19, Pa., age 36, College of Physicians and Surgeons Columbia University 1954, in internal medicine residency at Philadelphia General Hospital, available between July and September, 1956.

*Alfred M. Steinman, 515 Ocean Ave., Brooklyn 26, N. Y., age 32, Long Island College of Medicine 1949, residency in Internal Medicine and Cardiology, veteran, available immediately.

Orthopedics

*Andrew G. Hudacek, Kosair Crippled Children Hospital, Louisville 17, Kentucky, age 31, Georgetown University 1948, Board eligible in Orthopedics, veteran, available October 1, 1955.

Pathology

*James Kendall Boyd, 1745 S. St. Louis Ave., Tulsa, Okla., age 39, University of Tennessee 1942, Board eligible in Pathology, veteran, available immediately.

Pediatrics

*Arthur T. Hall, 314 Allison St., Sayre, Pa., age 33, University of Rochester 1952, two year residency in Pediatrics, veteran, available July 1, 1955.

*Leslie W. Langley, Jr., 1709 De Pauw Ave., New Albany, Ind., age 32, University of Louisville School of Medicine, 1953, now taking second year of pediatric residency, veteran, available July 1, 1956.

Ralph Lee Perry, 10812 Mt. Carmel Rd., Cleveland 4, Ohio, age 32, Western Reserve University, 1953, two years, appr. pediatric training, veteran, available July 1, 1956.

Surgery

Alice F. Gambill, 1605 Clover Lane, Fort Worth, Texas, University of Oklahoma 1949, one year residency in General Surgery, available immediately.

*William A. Holbrook, Jr., University Hospital, Baltimore, Maryland, age 34, University of Maryland 1945, Board qualified in General Surgery, veteran, available August, 1955.

*C. Richard Jernigan, Parkland Memorial Hospital, Dallas, Texas, age 29, Southwestern Medical College 1948, will be Board qualified in General Surgery Jan-

(Continued on Page 404)

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Physician Placement

(Continued from Page 396)

uary 1, 1956, veteran, available January 1, 1956.

*Chester T. Podgorski, 3926 N. Keeler Ave., Chicago, Ill., age 37, Loyola 1943, three year residency in General Surgery, veteran, available April 13, 1955.

UROLOGY

Woodrow Payne, M.D., 764 McConnell, Memphis, Tenn., age 34, University of Tennessee, 1944. Board Qualified in Urology, veteran, available July, 1956. (Wants city 20,000 - 75,000—private group, partnership).

*David M. Stahl, 2624 W. 75th Pl., Kansas City 13, Missouri, age 28. Baylor College of Medicine 1952, in residency in urology, veteran, available July 1, 1956.

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There are still many countries in need of books and journals in the field of medicine for libraries of medical schools and associations. Posts specifically requesting back issues of the A.M.A. *Journal* are Rio de Janeiro, Managua, Madrid, Bangalore, Taipei, Beirut, and Tegucigalpa. Back files of medical journals and books should be mailed to: The U.S. Book Exchange, 1816 Half Street, S.W., Washington, D.C.

Book Review

(Continued from Page 402)

The dentists of Oklahoma owe the committee and Doctor Clark a vote of confidence for producing the first narrative history of a state dental association.—Robert G. Hirschi, D.D.S.

MANAGEMENT OF ADDICTIONS. Edward Podolsky, M.D., Editor. Published by Philosophical Library. $7.50.

This is truly a hodge-podge. There are 35 chapters written by about 50 authors. The foreword, written by Podolsky, indicates a biased orientation to the problems of addiction, e.g., "Addictive drinking is symptomatic, but not necessarily a symptom of personality or other disorders."* My goodness, what a statement!

And again, "In our culture morphine may be used to express hostility, although this may produce guilt feelings; suffering during withdrawal may be used as expiation for such guilt."** My goodness again! Most readers not hypnotized by psychoanalysis would throw the book away at this point. I would have done so, but I had already made a verbal contract to write a review.

It was a serious error for the editor to have the first chapter written by a psychoanalyst because a psychoanalyst cannot write a psycho-dynamic paper. He can only write a psycho-static Freudian paper. As long as people interested in the subject of addictions (be it toward alcohol, barbiturates, opiates—or even eating!) think that an explanation, or a solution of the problem can be reached by a study of such abstractions as "hostility" and "guilt reactions," then no progress will be made.

Other chapters of the book are excellent presentations on the part of physicians in the medical management of addiction. Such efforts include adrenal cortical hormone therapy, vitamin and dietetic considerations, Antabuse, and controlled sedative adjuncts.

The most important contribution that the book makes to the reader is the fact that the problem of addiction continues at present to be "Management of Addiction."—Coyne H. Campbell, M.D.

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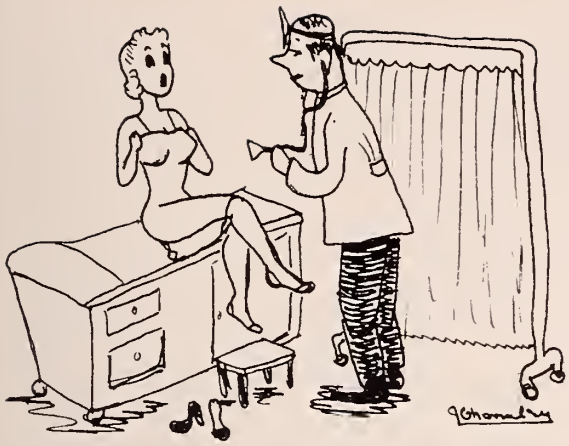
**Page xvi



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Deaths

(Continued from Page 389)

GILBERT H. HALL, M.D.
1872-1955

Gilbert H. Hall, M.D., Tulsa physician, died September 17 from complications following a fracture suffered in a fall five weeks before his death.

Doctor Hall had practiced in Tulsa since 1927 and was an Honorary Member of the Oklahoma State Medical Association and had received a 50 Year Pin. He also was a life member of the American Proctologic Society. He was a 32nd degree Mason, and a member of the First Baptist church.

Doctor Hall was born in Pittsfield, Ill. and was graduated from the University of Nebraska, the University of New York City and Bellevue Medical College. He practiced in Omaha and Kearney, Neb. before coming to Tulsa.

CARL H. GUILD, M.D.
1888-1955

Carl H. Guild, M.D., Shidler, died September 15. He was a prominent Osage county physician, banker and civic leader.

Doctor Guild was born at Silverlake, Kans. and graduated from the University of Oklahoma School of Medicine. He opened his first office in Osage, Okla. in 1919, later moving to Apperson and in 1928 established offices in Shidler.

He had served on the local school board for 25 years and was a director of the Shidler State Bank, a 32nd degree Mason, and member of the American Legion. His son, Carl H. Guild, Jr., M.D., practices in Tulsa.

DERK A. VLOEDMAN, M.D.
1899-1955

Derk A. Vloedman, M.D., prominent Woodward physician, died October 6 at his home following a heart attack.

Doctor Vloedman was born March 16, 1899, in Chicago and was a graduate of Loyola University. He received a master's degree from Northwestern University.

He practiced in Chicago and Blue Island, Ill. and moved to Woodward in 1952.

He was a veteran of World War I, a member of the First Methodist church. Masonic Lodge, and American Legion.

HAVE YOU HEARD?

J. E. COCHRANE, M.D., Byars, was honored recently at a surprise party given by 500 of his friends honoring his 38 years of medical practice.

ONIS FRANKLIN, M.D., Broken Arrow, was honored with a Doctor Franklin Day in that city September 22.

WILLIAM K. ISHMAEL, M.D., Oklahoma City, spoke on "Diseases that Drugs Can't Touch" at a meeting of the Ponca City Methodist Men's Club.

BASIL HAYES, M.D., Oklahoma City, discussed the romance of surgery at the Capitol Hill Rotary club recently.

ESTHER GROOM, M.D., has joined the staff of the Miami Clinic.

A. C. FINA, M.D., has been named chief of staff of Mary Hurley hospital in Coalgate.

JACK W. DONALD, M.D. and JOHN ADAIR, M.D., Ardmore physicians, have also opened an office in Wilson.

FRANK J. NELSON, M.D., Tulsa, has been named head of the health division of the Tulsa Council of Social Agencies.

JOHN PERRY, M.D., Oklahoma City, has moved to Hartsville, South Carolina, where he will be associated with Sonoco Products Company.

E. T. ROBINSON, M.D., retired Cleveland physician, was presented with a plaque and other special honors at the Cleveland Pioneer Day celebration in September.

ROBERT H. FURMAN, M.D., Oklahoma City, spoke on heart disease at a meeting of the Ponca City Lions club recently.

L. J. GEORGE, M.D., Stuart, was honored with a "Doctor George Day" in that city on his birthday October 8. Planned as a surprise celebration for Doctor George, open house was held at his office all day.

BROCK R. WESTBROOK, M.D., Tulsa, presented a paper recently at the newly formed Tulsa Obstetrical and Gynecological Society.

W. B. LAIN, M.D., Clinton, has joined the Carnegie Hospital staff.

J. L. COX, M.D., Ardmore, was honored recently by the University of Tennessee at their "Golden T" ceremonies.

C. W. TEDROWE, M.D., Woodward, was honored as the oldest living former grand High Priest in northwestern Oklahoma by more than 100 Masons from that region who gathered in Woodward.

Editorials

Statistical Methods in Medicine

The application of statistical methods in clinical research is like the automobile and the washing machine, here to stay. While it is not necessary for the clinician to be able to apply statistical tools in his own practice, it is necessary for him to understand the terminology used in the literature of clinical medicine in which statistical methods of analyzing data are used.

Why all the bother about statistics? Wouldn't just ordinary common sense do? "The essence of an experiment in the treatment of a disease lies in comparison . . . there is a common catch-phrase that human beings are too variable to allow of the contrasts inherent in a controlled trial of a remedy. Yet if each patient is 'unique' it is difficult to see how any basis for treatment can be sought in the past observations of other patients—upon which clinical medicine is founded. In fact, of course, physicians must, and do, base their 'method of choice' upon what they have seen happen before—whether it be in only two or three cases or in a hundred.

"Even though, broadly speaking, human beings are not unique in their responses to some treatment, there is no doubt that they are likely to be variable, and sometimes extremely variable. Two or three observations may, therefore, give, merely through the customary play of chance, a favorable picture in the hands of one doctor, an unfavorable picture in the hands of another. As a result, the medical journals become an arena for conflicting claims—each in itself, maybe, perfectly true of what the doctor saw but insufficient to bear the weight of the generalization placed upon it.

"Far, therefore, from arguing that the statistical approach is impossible in the face of human variability, we must realize that it is *because* of variability that it is often essential. It does not follow, to meet another common criticism, that it invariably demands large numbers. It may do so; it depends upon the problem. But the responses to treatment of a single patient are clearly a statement of fact—so far as the observations were truly made and accurately recorded. Indeed that single case may give, in certain circumstances, evidence of vital importance.

"If, for example, we were to use a new drug in a proved case of acute leukaemia and the patient made an immediate and indisputable recovery, we should have a result of the most profound importance. The reason underlying our acceptance of merely one patient as illustrating a remarkable event—not necessarily of cause and effect—is that long and wide experience has shown that in their response to acute leukaemia human beings are *not* variable. They one and all fail to make immediate and indisputable recoveries. They one and all die. Therefore, although it would clearly be most unwise upon one case to pass from the particular to the general, it would be sheer madness not to accept the evidence presented by it.

"If, on the other hand, the drug were given to a patient suffering from acute rheumatic fever and the patient made an immediate and indisputable recovery, we have little basis for remark. That recovery may clearly have followed the administration of the drug without the slightest probability of a related cause and effect. With this disease human beings *are* variable in their reactions—some may die, some may have prolonged illnesses but recover eventually with or without permanent damage, some may make immediate and indisputable recoveries—whatever treatment we give them. We must, therefore, have more cases before we can reasonably draw inferences about cause and effect. We need a statistical approach and a designed experiment . . . "[1]

It is reasonably true to state that common sense is not always enough, that the statistician helps plan proposed experiments so that as many variables as possible are neutralized and those that cannot be are taken into account and that by using his methods much more information will be obtained from an experiment and valid conclusions can be drawn. The editors of the *Journal*

seeking help where it can be found will attempt to get over the meaning of some of the statistical methods and the jargon used in medical literature.

1. Hill, A. Bradford: *Principles of Medical Statistics.* The Lancet Limited, 7 Adam Street, Adelphi, London. 1955.
2. Treloar, Alan E.: *Elements of Statistical Reasoning.* John Wiley and Sons, Inc. New York. 1939.

Frequency Distribution

There is an orderliness in variation in nature that can be seen as a curve when the magnitude of those variations is placed in order. When plotted, this curve builds up to about the middle and then tapers off. Consider the height of men—a very few will be 4′10″ and a very few will be 7′. The variable is the height. The magnitude is the number observed to be at each point on the variable. The curve expresses the frequency with which each successive magnitude occurs. When the heights of a large number of men are plotted on a graph, a curve will be seen which builds up to about 5′10″-5′11″ and then tapers off. The incubation period for mumps varies between 14 and 28 days, with a mode of 18 to 19 days. The frequency distribution curve graphically shows this. Apparently all variables in nature when so plotted produce such an orderly curve. The clinician uses this curve daily in mental calculations when considering probabilities in diagnosis, in prognosis, in giving advice as to when a patient can expect to leave the hospital, to go back to work, to go to school, to take a trip, etc. This curve bringing order out of what was chaos was first developed by the French mathematician, Laplacé, and the German astronomer and mathematician, Carl Gauss, and is "the principle cornerstone of the modern statistical edifice."[2]

1. Hill, A. Bradford: *Principles of Medical Statistics.* The Lancet Limited, 7 Adam Street, Adelphi, London. 1955.
2 Treloar, Alan E.: *Elements of Statistical Reasoning.* John Wiley and Sons, Inc. New York. 1939.

Abstracts Requested For Annual Meeting

Physicians who would like to present papers at the annual meeting of the Oklahoma State Medical Association to be held May 7-9, 1956 in Oklahoma City are requested to submit abstracts of their papers on or before February 1, 1956.

Abstracts need not exceed 150 words and should be sent to the chairman of the committee, Robert M. Bird, M.D., Department of Medicine, University Hospital, 800 N.E. 13th St., Oklahoma City.

Deaths

Joel S. Hooper, M.D.
1874-1955

Joel S. Hooper, M.D., recently of Camden, N.Y. and formerly of Tulsa and Muskogee died October 18 in a convalescent home in New York where he had been a patient for two years.

He was a graduate of Buffalo University School of Medicine in Buffalo, N.Y. and came to Tulsa in 1920. He also practiced a short time in Williamsport, N. Y. and Navasota, Texas.

G. S. Baxter, M.D.
1879-1955

George S. Baxter, M.D., pioneer Shawnee physician, died October 29, 1955.

A prominent physician for many years, he had received a 50 Year Pin in the Oklahoma State Medical Association. He was born January 19, 1879 and graduated from Memphis Hospital Medical College.

Using the LABORATORY *in* LIVER DISEASE

W. A. SODEMAN, M.D.

The diagnostic value of liver function tests depends upon their interpretation in relationship to clinical data. Properly selected, properly performed and interpreted, properly related to the clinical states, they may be indispensable aids to diagnosis and treatment. Unrelated to such data, they may be equally misleading.

When are such tests used? Seldom are they done routinely unless there is continual exposure to hepatotoxic agents in industry. In general, there are three important circumstances for using liver function tests. They are:

(1) To help confirm hepatic damage in patients without jaundice when other clinical data suggest such involvement.

(2) To differentiate the various types of jaundice, especially the hepatogenous and extra-hepatic obstructive types.

(3) To follow hepatic disease for severity or damage, course of the process, and progress of recovery.

Certain facts must be kept in mind in using liver function tests. They include:

(1) No liver function test alone is diagnostic of hepatic damage. All such tests may be positive at times when the primary disease is outside the liver.

THE AUTHOR

W. A. Sodeman, M.D., a guest speaker at the 1955 Annual Meeting of the Oklahoma State Medical Association, is Professor and Chairman of the Department of Internal Medicine, University of Missouri School of Medicine, Columbia.

(2) Grave liver disease may occur without evidence in the usual liver function tests. Fatty changes, abscess formation, and liver metastases may occur although the usual liver function tests show nothing abnormal.

(3) Positive tests do not indicate etiologic factors. The tests are important in establishing the presence of liver damage but may not be of any great aid in differentiating the etiologic types. Differentiation must be done chiefly upon the basis of clinical findings and accessory laboratory data. The tests for liver function therefore require an intimate correlation with the rest of the clinical data.

(4) Tests do not necessarily correlate with each other. No single test or group of tests is satisfactory for all diagnostic problems.

(5) Repetition of tests may be necessary. Tests taken at any one time may reveal abnormalities but may not indi-

cate whether there is progression, regression, or a static state. Trends seen in repeated tests may clarify differentiation of types of jaundice. Changes in the tests depend upon the state of the hepatic disease, and as the process unfolds the tests may change.

(6) As in all procedures, there may be laboratory variability. One must know the reliability of, the variability in, and the consistency of work in the particular laboratory he uses to interpret the tests satisfactorily.

Two obvious facts emerge from those statements. First, a single test is not satisfactory. A group of tests—the so-called bracket or profile must be done. *The number and the type vary with the purpose and the clinical problem as described below.* Second, repetition of tests as the disease progresses may be essential.

Which tests should one choose? Selection depends upon availability, simplicity, value, and the purpose. More than 500 tests have been described. Many have been discarded because of their complexity, the cumbersomeness of the technic, and the difficulties in interpretation. The development of the newer reliable methods has permitted us to consider a minimal requirement for optimal study.

The following tests represent a workable desirable minimum from which to choose:

(a) One minute and total serum bilirubin
(b) Urine bilirubin and urobilinogen
(c) Thymol turbidity and flocculation
(d) Cephalin-cholesterol flocculation
(e) Zinc turbidity
(f) Bromsulphalein retention
(g) Albumin and globulin fractionation
(h) Total and esterified cholesterol
(i) Alkaline phosphatase
(j) Prothrombin activity
(k) Fecal urobilinogen

All tests are *not* needed in *all* cases. From the foregoing group, one may choose combinations for the clinical purposes at hand. In general, the following approaches are satisfactory:

I. Initially to confirm hepatic damage in patients without jaundice when suggestion of such involvement arises from other clinical data (historical information,physical findings, results of laboratory and diagnostic surveys not done primarily for liver disease, and in the diagnosis of disease which is known to involve the liver). Almost any or all the tests may be positive. At times with nondescript clinical findings it is only by use of some of the tests that clinical findings may be satisfactorily established as hepatic in origin. Satisfactory in most acute processes is the following group:

One minute and total serum bilirubin
Urine bilirubin and urobilinogen
Thymol turbidity and flocculation
Cephalin-cholesterol flocculation
Zinc turbidity
Bromsulphalein retention

In chronic processes if active damage to liver cells occurs, this group is likewise helpful; and at times, especially in cirrhosis, the serum albumin may also be important because of remarkable reductions in this protein fraction. The bromsulphalein test may show the only striking abnormality when active damage of liver cells is not important but when liver cells have been destroyed for the bromsulphalein test is a fairly reliable index of the amount of functioning parenchymal tissue. Then again, in malignant metastases the serum alkaline phosphatase, not listed above, may be the only positive test.

II. Tests to differentiate the various types of jaundice. Here hepatic versus extrahepatic jaundice is the most important diagnostic problem. Most useful are:

One minute and total serum bilirubin
Urine bilirubin and urobilinogen
Thymol turbidity and flocculation
Cephalin-cholesterol flocculation
Zinc turbidity
Total and esterified cholesterol
Alkaline phosphatase
Fecal urobilinogen

Easily separated are hemolytic processes producing icterus, associated with "indi-

rect" van den Bergh reactions, elevation in stool and urine urobilinogen, absence of urine bilirubin and evidences of bone marrow stimulation. In hemolytic disease, when the bilirubin is up, the ratio of the one minute and total bilirubin is as usual. Bilirubin does not appear in the urine. However, the one minute bilirubin is elevated in both obstructive and hepatogenous jaundice, and the ratio is of no help in the differential diagnosis. Blood bilirubin, in the list, therefore is helpful only in establishing the yellow pigmentation as icterus in the type of patients we are discussing. Generally bromsulphalein retention, the prothrombin time, and the serum proteins give little help in the differential diagnosis of obstructive and hepatogenous jaundice. Early in hepatitis, generally up to 10 or 12 days, fecal urobilinogen may be low and the urine urobilinogen absent. In serial observations, so important at four to five day intervals in these problems a "break through" in these determinations indicates relief of obstruction which may have been in the small biliary channels in hepatitis or in the common duct with movement or passage of a stone, or rarely sloughing of obstructive malignant tissue near the ampulla. At this time the reappearance of bilirubin in the stools increases the fecal urobilinogen and also the urinary urobilinogen to above normal. In addition, the tests helpful in differentiating extrahepatic and intrahepatic obstruction are the flocculation and turbidity tests, the blood cholesterol, including fractionation, and the serum alkaline phosphatase. Greatest difficulty arises in the presence of cholangiolitic hepatitis, in which involvement of the small cholangioles gives all the evidences of extrahepatic obstruction and little or no evidences of parenchymal damage. Usually a hepatitis will give positive flocculation tests and with intrahepatic obstruction, only minor elevations in cholesterol and alkaline phosphatase. Even so, the cholesterol fractionation may change, for esterification of cholesterol in the liver may be impaired, resulting in a reduction in the percentage of cholesterol esters. Continued extrahepatic obstruction, causing secondary damage to the liver, may produce positive flocculation tests; and the differentiation of liver damage plus obstruction, usual in early hepatitis, will not be separated from extrahepatic obstruction by the profile. The overlap of positive results can be differentiated (a) when repetition of certain of the tests such as the urobilinogen reactions, as already described, indicate release of ostruction or (b) when results of some tests reach levels so unusually out of normal range that extrahepatic obstruction is very likely. A set of standards helpful in these circumstances differs from the usual standards of abnormality. Useful are the values given in the following table modified from Wang:

Test	Extrahepative Obstructive Jaundice	Hepatogenous Jaundice
Serum alkaline phosphatase	Over 35	Under 35
Blood cholesterol	Over 300	Under 300
Thymol turbidity	Under 4	Over 1
Cephalin flocculation	Under +	Over +
Urobilinogen (urinary)	Not increased	Increased

Obstructive disease occurs frequently long before these tests reach the range indicated. For this reason, repetition of the tests with comparison of the changes at four to five day intervals is helpful. Because acute hepatitis may be made fulminating by operative procedures, the elimination of exploratory procedures for seven to 10 days may be and usually is the most desirable procedure. Repetition of the tests mentioned may result in prevention of surgical intervention. With the tests given, one can solve approximately 90 per cent of the instances of jaundice in which hepatogenous versus extrahepatic obstructive disease is the problem. The remainder may require either surgical exploration or preferably examination of a specimen obtained by puncture.

III. Tests to follow hepatic disease for severity of damage, course of the process, and prognosis in recovery. Here the problem is not that of diagnosing hepatic involvement or obstructive disease. Tests are chosen to indicate activity and progress of the disease. In acute phases, at the onset

of involvement or in exacerbations of a chronic process, the group used to confirm hepatic involvement (given under I), is in order. In late hepatitis, the turbidity and flocculation reactions vary. They may remain positive and not indicate need for therapeutic rest. Most useful tests here are:

Blood bilirubin
Bromsulphalein retention

In convalescence from hepatitis, the urine urobilinogen may also be most helpful, and some physicians may add the cholesterol fractionation. Generally the latter is not necessary. Before the other two tests show anything remarkable, it may at times indicate a drop in ester percentage from, for example, 65 per cent to 56 or 51 per cent. Such a finding indicates diminished liver function and too rapid mobilization of the patient.

In chronic active cirrhosis, paper electrophoresis indicates elevations in gamma globulin fractions which are related to positive flocculation tests. In the more chronic disorders in which inflammatory reactions continue and secondary changes in mesenchymal tissue occur, the turbidity and flocculation tests may show signs of activity. In acute exacerbations of disease the tests which are positive in acute disease again may be helpful. Frequently however, when such cellular disorder is not prominent, tests involved in excretion, and based upon impairment of total liver mass, may be most helpful. This is true in old inactive cirrhosis and to some degree in later stages of acute hepatitis. Under these circumstances, the most helpful are bromsulphalein retention, varying degrees of bilirubin elevation, and increased urobilinogen excretion in the urine.

Mention has been made of the involvement of the liver, accompanied by positive liver function tests, in acute diseases which are primarily extrahepatic, such as pneumonia, infectious mononucleosis, and others. Similar diseases, more chronic in nature, often associated with low grade digestive or general symptoms, may be confused with primary disease of the liver when liver function tests are positive. Congestive heart failure, leprosy, and ulcerative colitis are examples. Such diseases make one recall the earlier remarks that *liver function tests must be interpreted in the light of the clinical status* of the patient. Infectious mononucleosis deserves special mention. It may produce important hepatitis. Still the changes in the serum globulin fractions may produce positive flocculation tests with little or no relationship to the problem of hepatic involvement. Such tests may remain positive for months: and long after the symptoms of infectious mononucleosis have cleared, a patient developing another process, if studies of liver function are done, may be classified as having hepatic involvement as part of the new disease process. Again clinical interpretation is crucial. Similar circumstances occur in disseminated lupus.

Summary

Liver function tests are of inestimable value but only when used and interpreted with adequate clinical study of the patient and then often only when followed and repeated. Positive or negative, they may lead the investigator astray. One must know how reliably they are done, which ones he wants, when he wants them, how often and when they should be repeated. Then he must integrate them into other data on the patient. They are but one tool in the diagnosis and management of liver disease. They are no more useful than the cerebration of the clinician doing them.

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Spinal Anesthesia in More Than 500 VAGINAL DELIVERIES

MARVIN ELKINS, M.D.

During the past 20 years many important contributions have been made to the improvement of obstetrical analgesia and anesthesia. Among the more significant advances has been the safe and effective use of spinal anesthesia or so-called "saddle block." Despite its desirable attributes, spinal anesthesia has not been generally accepted. Many of the objections to its use have not proved to be valid in my experience. This paper will outline a clinical procedure employing spinal anesthesia which has been practical, safe, and effective. It will present evidence which answers most of the objections.

Clinical Material

The clinical material is taken from the author's experience with obstetrical spinal anesthesia for vaginal delivery and encompasses more than 500 such cases. The statistical summary includes the last 100 consecutive cases in which I have used the outlined procedure. This summary represents an unselected series of patients and excludes only those cases whose immediate delivery made spinal anesthesia unnecessary. This method of selection obviously places the statistics in the worst possible light since all complicated and difficult cases are included while many of the simpler cases are excluded.

All patients were delivered in a general hospital and with only generally available equipment. A qualified nurse was the principal professional assistant. In most cases labor was allowed to be spontaneously initiated, but many labors were started by rupture of the membranes when it was indicated and feasible.

THE AUTHOR

Marvin Elkins, M.D., Muskogee, is a graduate of the University of Oklahoma School of Medicine of 1938. He received a B.S. from O.U. in 1936. Doctor Elkins limits his practice to his specialty, obstetrics and gynecology. He served an internship and residency at Orange Memorial Hospital, Orange, New Jersey.

Clinical Procedure

After admission to the hospital, the patient is given routine examination and preparation. When the patient complains, she is given demerol 100 mg., scopolamine gr. 1/200, and seconal gr.jss. In primipara, and occasionally multipara, it may be necessary to give one or two additional 50 mg. doses of demerol. If they fail to relieve the pain or the patient is three to four fingers dilated, spinal anesthesia is administered. It should be emphasized that the anesthesia is given during the first stage of labor, as soon as the so-called "twilight sleep" is not effective in relieving pain. It has seemed advantageous to administer the block to multiparas with regular pains when the cervix is two fingers dilated and then to rupture intact membranes.

The spinal anesthesia is given with the patient sitting on the side of the delivery table, and she is kept in that position for 30 seconds. She is then placed flat with the head of the table elevated 10° and with a pillow under her head. Pontocaine is the agent employed. A dose of 20 to 22 mg (2 to 2.2 ml. of a 1 per cent solution) is mixed with 1 ml. of 10 per cent dextrose and is administered through a 24 gauge needle in-

serted at the level of the pelvic crest. This dose of pontocaine and the needle size are important for the best results.

After administration of the anesthesia, the blood pressure and pulse rate are checked at five minute intervals for three or four times, or until the pressure has stabilized. Observations of blood pressure are then continued at 15 minute intervals. Rarely, there will be a moderate, transient fall in pressure (six per cent in the present series). If this occurs, ephedrine, gr. 3/16 or gr. 3/8, is administered intramuscularly. The surprisingly low percentage of such cases was possibly due to the frequent use of oxygen given with a nasal catheter whenever any patient complained of nausea. Serious or persistent hypotension has not occurred in any of the more than 500 patients so treated.

Injection of the anesthetic agent during a uterine contraction has been without incident. No effort is made to avoid such a timing, and no case of too high anesthesia has occurred. Some authors[1,2] think such injection is dangerous, but the fear has not been justified in this series.

The readings of blood pressure and observation of the patient are made by the nurse. After the blood pressure has stabilized, the doctor may then rest in the hospital, where he is quickly available. It has been my policy to remain in the hospital, but occasionally with a first labor I have been able to do some work outside the hospital without an untoward incident.

If the patient progresses to the termination of the second stage of labor under the influence of the original spinal anesthetic, delivery is accomplished with low forceps and usually an episiotomy. If effective anesthesia ceases before delivery is terminated, the spinal anesthetic is repeated with the original dose and technique. Two anesthetics have been given many times, and rarely three have been necessary. There have been no deleterious effects from these repeated procedures. Ordinarily, one injection maintains anesthesia for two and one-half or three hours, but occasionally it will last as long as four or five hours.

Not infrequently an unexpected delay in delivery, as in a difficult rotation of a deep transverse arrest, may necessitate intravenous demerol. Rarely, a light ether anesthesia is given.

With this procedure the patients experience a maximum of comfort throughout the entire period of labor and delivery.

Clinical Results

A statistical summary of the results from 100 recent consecutive cases treated by the above procedure is presented in table 1.

TABLE 1.

RESULTS OF SPINAL ANESTHESIA IN 100 CONSECUTIVE CASES

Number of patients	100
Primipara	46
Number of spinal anesthesias	116
One	86
Two	12
Three	2
Interval between repeat spinal anesthesias:	
Shortest	55 min.
Longest	5 hrs. 30 min.
Average	3 hrs. 35 min.
Anesthesia with 2 spinals, average:	4 hrs. 47 min.
Anesthesia with 3 spinals, average:	11 hrs. 16 min.
Average labor, primipara:	
Sedation to delivery	6 hrs 17 min.
Spinal to delivery	2 hrs. 43 min.
(Range: 25 min. to 12 hrs. 5 min.)	
Time from last spinal to delivery, average:	1 hr. 21 min.
(Range: 15 min. to 4 hrs. 45 min.)	
Number receiving supplemental ether	4
(50 min; 2 hrs. 46 min; 30 min; 3 hrs. 10 min. after spinal).	
Number receiving intravenous demerol after spinal:	
50 mg.	11
100 mg.	7
Number receiving vasopressure drugs	8
Before delivery	6
After delivery	2
Dose:	
gr. 3 16 ephedrine	5
gr. 3/8 ephedrine	2
gr. 9 16 ephedrine	1
Number receiving blood and or fluids	4
Before delivery (one grand mal seizure)	2
After delivery (one cervical tear)	2

Neurologic complications:	
Postspinal headache	4
(None since using 24 gauge needles)	
Respiration paralysis	0
Uterine inertia	0
Retained placenta	0
Postdelivery catheterizations:	
Total patients	6
Times catheterized (total)	7
Abnormal presentations:	
Occiput posterior or transverse	22
Breech	4
Total	26
Fetal mortality	3
Corrected fetal mortality	2
Average hospitalization, including labor	3.1 days
Thrombophlebitis or emboli	0

Discussion

Among the objections to the use of spinal anesthesia, the following probably are heard most frequently:

1. Many large centers require that a physician be in constant attendance following administration of spinal anesthesia.[2] This requirement necessitates the use of an anesthesiologist and frequently makes the attendance of two physicians necessary. Such a situation is impractical and expensive. I believe that my experience indicates that such a requirement is unnecessary.

2. Many physicians have stated a high incidence of anesthetic failure. This high incidence has in a large measure been due to the mistaken impression that spinal anesthesia must be delayed until dilatation is complete and the head is on the perineum. The anesthetic is technically difficult to administer at this time because of poor cooperation from the patient and the press for time. If it is given during the first stage of labor, such difficulties are not encountered.

3. Many have objected because of anesthesia of too short duration and/or inadequate control of pain. This objection is felt to be due to the inadequacy of the recommended pontocaine dose (2 to 6 mg.). My routine of 20 to 22 mg. doses has proved effective and safe.

4. Many object to the time in attendance required by a spinal anesthetic. To them I say that an average investment of three to four hours in a primipara is not excessive if it assures the patient of the safest and most comfortable labor and delivery possible. I particularly believe that this investment is not excessive for the physician who delivers less than 150 patients a year. Actually labor seems shortened by the use of spinal anesthesia.

5. Many[3, 4] have thought that spinal anesthesia, with the dose used or given during the first stage, prolongs labor. The results in table 1 clearly do not verify those conclusions in my experience. An average labor in primipara from sedation to delivery of only six hours and 17 minutes with no cases of uterine inertia would indicate the opposite.

6. Many think that there is too high an incidence of so-called "spinal headache." To them I point to my incidence of four per cent when using the technique described. Since using a 24 gauge needle, not a single headache has occurred. This period covers about half of the 100 cases analyzed. Ahearn and Huston[3] reported a 19.5 per cent incidence of postspinal headache. However, in their series, a 20-22 gauge needle was used. An incidence of two per cent when a 24 gauge needle is used, as reported by Ahearn and Marshall,[5] would seem to emphasize also the importance of the size of the needle in preventing this complication. Headaches have been easily controlled with an ampoule of caffeine sodium benzoate intravenously, followed by two plain empirin tablets three times a day for four to six days.

7. Spinal anesthesia for pregnant women has been declared dangerous because of central nervous system complications.[6] In my experience there have been no such complications of a serious nature despite a technique employing large amounts of the anesthetic agents and despite the fact that this dose is frequently repeated once or twice. Even minor complications have been negligible.

In addition, the above outlined clinical procedure has the following positive advantages:

1. When properly applied, this method results in an almost complete freedom from pain during the labor and delivery.

2. Because of the restricted use of respiratory suppressing drugs and inhalation anesthetics, the problems in infant resuscitation are reduced to an absolute minimum.

3. With the adjustment to a routine, the entire clinical procedure is very simple to administer and supervise. It is especially good when the services of a trained anesthesiologist are not available and is therefore easily adaptable to general practice.

4. The procedure is safe, as illustrated by the fact that not a single maternal mortality attributable to anesthesia has occurred in more than 500 cases.

5. An average total period of hospitalization of 3.1 days for labor and postpartum care in a group composed of 46 per cent primiparas and 26 per cent abnormal presentations is economically favorable to the patient and/or insurance company.

6. A minimum of special postpartum procedures is a great help to hospitals with the almost universal shortage of nurses.

Summary

A simple and practical technique of spinal anesthesia for labor and vaginal delivery has been described. This technique uses a dose of 20 to 22 mg. of pontocaine given early in labor and has been employed in more than 500 deliveries. There have been no serious complications. An analysis of the last 100 consecutive cases has been made. This analysis shows an absence of major central nervous system complications, a four per cent incidence of postspinal headaches, and a six per cent incidence of drop in blood pressure severe enough to require small doses of ephedrine.

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INFLUENZA *in* OKLAHOMA, 1955*

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Influenza outbreaks occur in various locales of the United States every year and usually present a diagnostic problem.[1] Many characteristics of the causal agents are responsible for the yearly appearance of this disease. First, there are three known types of influenza; type A, which has an epidemic cycle of two-three years; type B, which has an epidemic cycle of four-five years; and type C, which has not been adequately studied to determine its epidemic cycle. Second, within each type are many strains. Third, each year a new strain appears, and it often differs in its antigenic consistency from that of the former year. The mosaic of antigens varies greatly between strains of one type so that the host is not protected even though he has had previous contact with a strain of the same type. The mutability of the influenza virus, therefore, accounts for many of

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the yearly outbreaks of the disease and for the ineffectiveness of the vaccines. Lastly, the antibodies produced by the human body give protection for only a short time; they are relatively ineffective after six to eight months.

A study of the causal agent of each outbreak is made, when possible. These studies should aid in a better understanding of the epidemiology of influenza and lead to a more effective program of vaccination. This report, made in cooperation with the World Health Organization Influenza Study Program in the United States, deals with the isolation and identification of an influenza virus which was prevalent in Oklahoma during January and February, 1955.

Materials and Methods

Nasal washings were obtained during the first 48 hours of the disease from patients suffering from what was clinically called influenza. The specimens were stored in the dry ice chest until viral isolation was attempted. For viral isolation, 0.2 ml of nasal washings containing penicillin and streptomycin was inoculated into the amniotic sac of the developing chick embryo.[2] The viruses so isolated were identified with known immune serums by means of the hemagglutination inhibition reaction of Salk.[3]

Serum specimens were obtained during the acute stage of the illness and two weeks later during convalescence from each person from whom nasal washings had been obtained. These serum specimens were tested by the Salk hemagglutination inhibition technique for the presence of specific antibodies. When the nasal washings were negative for viral isolation, a fourfold increase in specific antibody titer between the specimen of serum taken during the acute stage of illness and the specimen taken during convalescence was considered diagnostic of influenza.

Results

Influenza viruses were isolated from the nasal washings from two patients (table 1). An attempt was made to identify these viruses by the hemagglutination inhibition technique with five different known immune serums. The known immune serums were PR8, 1934 type A; Cuppett, 1950 type A; Nebraska, 1953 type A; Lee, 1940 type B; and IBI, 1950 type B. The hemagglutination caused by these viruses was not inhibited by type A immune serums. Therefore, they were not related to strains of type A influenza. The isolated viruses reacted with the Lee immune serum, but it was noted that the agglutinations were not strongly inhibited by the Lee antiserum and even less inhibition was noted against the 1950 type B strain of virus. The isolated strains were identified as type B viruses, and the Influenza Strain Study Center in New York City has designated them as B/Oklahoma-1/55.[4]

The results of the study with the serum specimens obtained during the acute phase

INFLUENZA DIAGNOSIS IN OKLAHOMA

Patient	Date of onset	Virus Isolation	Serologic Response Against Designated Viruses					
			PR8	Cuppett	Nebraska	Lee	IBI	B/Okla.1/55
1	1/10/55	Negative	—	—	—	—	*	—
2	1/14/55	Negative	—	—	—	*	*	+
3	1/20/55	Negative	—	—	—	—	—	+
4	1/20/55	Negative	—	—	—	*	*	+
5	1/21/55	Negative	—	—	—	—	—	—
6	2/ 4 /55	B/Okla.1/55	—	*	+	—	+	+
7	2/18/55	B/Okla.1/55	—	—	—	—	*	+

* Increase less than fourfold
— No increase in titer
\+ Fourfold or greater increase

TABLE 1

of the illness and convalescence are shown in table 1. Influenza was diagnosed as the cause of the respiratory disease in five of the seven patients. This was determined by a fourfold or greater rise in antibody titer against B/Oklahoma-1/55 influenza virus. An increase in antibody titer of less than fourfold was noted in the serums of several patients against Lee and IBI viral antigens. This less than fourfold increase is not considered diagnostic, but indicates the relationship of the isolated virus to strains of type B. A fourfold or greater increase in antibody titer between the serums of patient number six was noted with IBI and Nebraska viruses, and an increase of less than fourfold was noted with the Cuppett virus.

Discussion

From July, 1954, through June, 1955 many workers in the United States have reported the isolation of influenza type B.[5] The disease was reported first in New York State in December, and by January had spread along the Eastern Seaboard. However, the first reported isolation of influenza B virus was from a patient at the Great Lakes Naval Training Station, Illinois, whose illness occurred during the last week of December, 1954. This strain was antigenically similar to the strain isolated in Illinois the previous year.[6] By late January the disease had spread to the Midwest and Southwest. Oklahoma experienced a sharp outbreak of influenza during January and February, 1955. During this period influenza virus type B, B/Oklahoma-1/55, was isolated. It is antigenically similar to the Illinois strain. It is believed that this is the first reported isolation of influenza virus in Oklahoma.

The diagnosis of influenza was proved by the isolation of influenza viruses from the nasal washings from each of two patients and by the fourfold increase in the titer of the serums of five patients. In the serums of four patients there was an increase of less than fourfold in specific antibody titers to Lee and IBI viruses. The serum from patient number six showed a fourfold or greater increase in antibody titer to IBI and Nebraska and a less than fourfold increase in titer to Cuppett virus. The increase in titer of the antibody to the A viruses could indicate that an A type virus had been present earlier. None of the patients had been vaccinated recently. However, a type B influenza virus was isolated from the nasal washings of patient number six.

Influenza due to type A had been predicted for the winter of 1954-1955 by the World Health Organizations. This prediction was based on two considerations. First, the absence of influenza type A during the year July 1953 through June 1954, and the fact that influenza tends to occur in cycles of two or three years. Second, during May and June, 1954 there were sharp outbreaks of influenza due to the type A virus in South Africa and Australia and in August of the same year in the Philippine Islands. Type A influenza virus was recovered in March of 1955 in New York. This is the first time in two years that this virus has been encountered. In April a few more cases were noted in New York and California. Whether this is an indication as to the type of virus that will be present next season is only a guess.

Conclusion

Influenza was found to be the cause of an increase in the number of respiratory diseases in Oklahoma City, Oklahoma, in January and February, 1955. The diagnosis was based on the isolation of a type B influenza virus from the nasal washings of each of two patients and by the increase in titer of specific antibody in the serums of five patients. This virus was named B/Oklahoma-1/55. This is the first reported isolation of an influenza virus in Oklahoma.

Influenza caused by type A virus had been predicted but type A virus was not detected in Oklahoma by this laboratory.

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CERTAIN NARCOTIC PREPARATIONS CAN NOW BE SOLD ON ORAL ℞

The Federal Bureau of Narcotics has issued its long-awaited list of narcotic preparations that can be sold on oral ℞. Oklahoma Law is now also in effect. Following is the Federal Bureau's oral ℞ narcotic list:

(1) CODEINE (methylmorphine): Codeine content of compound must not exceed eight grains per fluid oz. or one grain per dosage unit. *Codeine must be compounded with—*

(a) "one or more active non-narcotic ingredients in recognized therapeutic amounts" (examples—Empirin Compound with Codeine, A.P.C. with Codeine, Coricidin with Codeine, Trigesic with Codeine); or

(b) "an equal or greater quantity of any isoquinoline opium alkaloid or salt thereof" (example—Copavin).

(2) DIHYDROCODEINONE (Hydrocodone, Dicodid, Hycodan) or any salt thereof: Dihydrocodeinone content of compound must not exceed one and one-third grains per fluid oz. or one-sixth grain per dosage unit. *Dihydrocodeinone must be compounded with—*

(a) "one or more active non-narcotic ingredients in recognized therapeutic amounts (examples—Bicotussin Syrup, Coditrate); or

(b) "a *fourfold* or greater quantity of any isoquinoline opium alkaloid or salt thereof" (example—Dihydrocodeinone 4 mg. with Papaverine, 16 mg.).

(3) DIHYDROHYDROXYCODEINONE (Oxycodone, Eucodal) or any salt thereof when compounded with one or more active *non-narcotic* ingredients in recognized therapeutic amounts. Dihydrohydroxycodeinone content must not exceed two-thirds grain per fluid oz. or one-twelfth grain per dosage unit. Narcotics Bureau does not know of any pharmaceutical specialty in this category currently on the market, but category was included to permit use in compounding oral ℞'s.

(4) DIONIN (Ethylmorphine) or any salt thereof when compounded with one or more active *non-narcotic* ingredients in recognized therapeutic amounts. Dionin content must not exceed one and one-third grains per fluid oz. or one-sixth grain per dosage unit (example—Terpin Hydrate and Creosote Compound with Dionin).

(5) ANY ISOQUNIOLINE ALKALOID OF OPIUM or any salt of any such isoquinoline alkaloid, *alone* or in combination with other active non-narcotic medicinal ingredients. According to the Narcotics Bureau, the only isoquinoline alkaloids of opium currently on the market are: *Papaverine, Narcotine, Cotarnine,* and *Narceine.*

(6) APOMORPHINE or any salt thereof *alone* or in combination with other active non-narcotic medicinal ingredients.

(7) NALLINE (N-allyl-normorphine, Nalorphine) or any salt thereof *alone* or in combination with other active non-narcotic medicinal ingredients. It is an antidote for morphine poisoning.

Oral ℞ Narcotic List Does Not Include —

(1) STRAIGHT Codeine, Dihydrocodeinone, Dihydrohydroxycodeine, or Dionin. An effort was made to get straight Dionin included in the list for ophthalmic solutions, but was unsuccessful.

(2) MORPHINE or any of its salts or compounds, except when they are included in preparations that have previously been known as *exempt narcotics.* In fact, oral ℞'s can be accepted for any *exempt narcotic preparation.* This is logical because any *exempt narcotic preparation* can be sold *over-the-counter* without any prescription within the limits set by federal and state laws and regulations.

(3) METHADONE COMPOUNDS (Amidone, Adanon, Dolophine). Methadone compounds with other non-narcotic ingredients were proposed with certain dosage limitations, but were not included in the final list.

(4) OPIUM COMPOUNDS with other non-narcotic ingredients for topical application were proposed, but not included.

(5) DEMEROL (Pethindine, Meperidine): Dilaudid (Dihydromorphinone); Cocaine; Pantopon; Metopon; Dromoran; Isomethadone; Methadol; Nisentil (Alphaprodine): Heptazone (Thebaine); Phenadoxone.

Oral ℞'s Must Be Reduced to Writing and Filed; No Refills

Like oral ℞'s for non-narcotic drugs under the Food and Drug Administration's Durham-Humphrey (D-H) law, and under our own Oklahoma Law, narcotic oral ℞'s must be reduced to writing promptly by the pharmacist and must be filed. The oral ℞ narcotic law specifically requires that ℞'s be kept for two years. Oral ℞'s must be kept in regular narcotic file.

Oral ℞'s can be accepted from any MD or other practitioner who has a narcotic registration. The practitioner must supply the pharmacist with the same information required for a written narcotic ℞.

Unlike FDA's Durham-Humphrey law, and our own harmful drug law, *refills cannot* be authorized on either a written or an oral narcotic ℞ (except, of course, in the case of *exempt narcotic* preparations). Check MD on orals.

There Are Now Three Classes of Narcotics Preparations

So far as the MD and the pharmacist are concerned, the new federal law and list issued by the Federal Bureau have the effect of creating three classes of narcotic preparations.

(1) WRITTEN ℞ NARCOTICS: All narcotic preparations that do not fall in either of the next two categories still require the presentation of a written ℞ before the pharmacist *can deliver the drug.*

(2) ORAL ℞ NARCOTICS: Oral ℞'s can be accepted by the pharmacist for preparations on the Federal Bureau's list in those states where such oral ℞'s are legal under state law. (Our Oklahoma Narcotic Act was amended in 1955 Session to comply with Federal Law.)

(3) EXEMPT NARCOTICS: No ℞ is required for exempt narcotics which can be sold over-the-counter, but federal law requires a written record of each sale in a registration book.

Except for the simple fact that oral ℞'s are authorized for a limited list of narcotic preparations, the new federal law and regulations do not change anything else with regard to the responsibilities of MD's and pharmacists in the handling of narcotics. For example—

Even if the MD supplies a pharmacist with a ℞, the latter cannot sell him narcotics for use in his office or other practice. The MD is not supposed to get any narcotics for these purposes unless he uses his official narcotics order form. If a pharcacist is registered as a "wholesaler," he can supply an MD via an official order form.

Association Activities

PRESIDENT'S LETTER

A relatively new profession has become active in education, organization and service in our state. This profession is the licensed practical nurse (L.P.N.) that is dedicated to the service of the sick, the hospital nursing force, and to the medical profession in the office, in the home and other positions needed by the profession.

Let it be clearly differentiated at this point that the L.P.N. is not the self-appointed so-called "practical nurse,"—with all deserved credit to anyone who has had good intentions of service,—who without any professional training has overnight donned a white uniform and emerged as a "practical nurse." On the contrary, the L.P.N. has actually had eighteen months of professional training under the guidance of and teaching by a registered nurse, or the equivalent thereof.

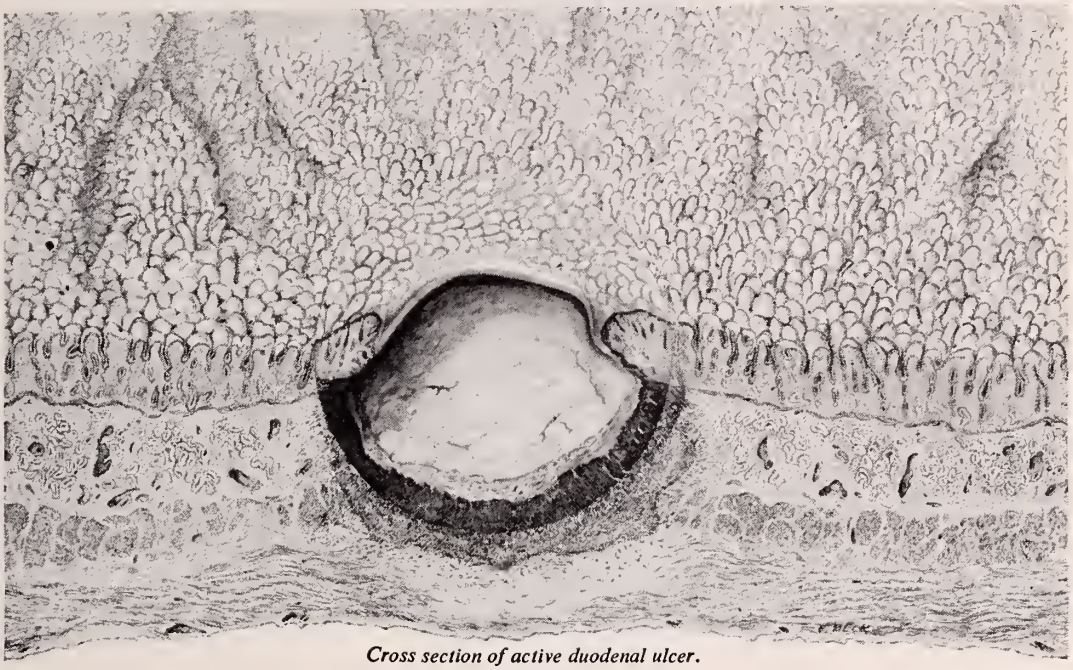
At the present time there are 2,619 active L.P.N.'s in Oklahoma and on October 30th this year the first school for training L.P.N.'s was begun with the didactic work being given in the Culbertson grade school building near the University Hospitals where the clinical teaching will be given. Both men and women may enter this school and receive the same training. There is at present a goodly number of male L.P.N.'s in practice in Oklahoma. This school also gives a refresher course for those who have been out of practice for some time or who may desire to become more proficient in their profession.

Hospital authorities who are using these L.P.N.'s in the team of nursing have been very laudatory in their comment on this rapidly growing profession.

The pay schedule for the L.P.N. is seventy-five per cent of that paid the R.N. in the different categories of work, such as hospital floor duty, private nursing, office work, etc. and they will work any period desired by the employer. This program looks like the beginning of at least a partial solution to a big problem, nursing shortage.

R. Q. Goodwin

President



Cross section of active duodenal ulcer.

Dramatic Remission of Ulcer Pain

Pain of ulcer is associated with hypermotility; the pain is relieved when abnormal motility is controlled by Pro-Banthīne.

"In studying[1] the mechanism of ulcer pain, it is obvious that there are at least two factors which must be considered: namely, hydrochloric acid and motility.

"... our studies indicate that ulcer pain in the uncomplicated case is invariably associated with abnormal motility....

"Prompt relief of ulcer pain by ganglionic blocking agents ... coincided exactly with cessation of abnormal motility and relaxation of the stomach."

Pro-Banthine Bromide (β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is a new, improved, well tolerated anticholinergic agent which consistently reduces hypermotility of the stomach and intestinal tract. In peptic ulcer therapy[2] Pro-Banthine has brought about dramatic remissions, based on roentgenologic evidence. Concurrently there is a reduction of pain, or in many instances, the pain and discomfort disappear early in the program of therapy.

One of the typical cases cited by the authors[2] is that of a male patient who refused surgery despite the presence of a huge crater in the duodenal bulb.

"This ulcer crater was unusually large, yet on 30 mg. doses of Pro-Banthine [q.i.d.] his symptoms were relieved in 48 hours and a most dramatic diminution in the size of the crater was evident within 12 days."

Pro-Banthine is proving equally effective in the relief of hypermotility of the large and small bowel, certain forms of pylorospasm, pancreatitis and ureteral and bladder spasm. G. D. Searle & Co., Research in the Service of Medicine.

---

1. Ruffin, J. M.; Baylin, G. J.; Legerton, C. W., Jr., and Texter, E. C., Jr.: Mechanism of Pain in Peptic Ulcer, Gastroenterology *23*:252 (Feb.) 1953.

2. Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthine, Gastroenterology *25*:416 (Nov.) 1953.

SEARLE

Physicians Asked To Submit Scientific Exhibit Ideas

Dou you have an idea which you would like to present to other physicians in Oklahoma? An unusual case? A series of cases? A new device or technique? An organization problem or plan of action? A piece of experimental work?

If so, consider working it up as a SCIENTIFIC EXHIBIT to be shown at the annual meeting of the Oklahoma State Medical Association in May, 1956.

Start now collecting your material and planning your exhibit. Since space is limited, you are encouraged to submit your application early. Your exhibit need not be large. It should be stimulating. Subjects which have special visual interest are particularly suitable. If problems of photography, art work, mimeographing, printing, etc. are hinderances we can put you in touch with individuals and commercial firms who do such work.

Preliminary Application for
Scientific Exhibit Space
63rd Annual Meeting
Oklahoma State Medical Association

Oklahoma City, Oklahoma — May 7-9, 1956

(Please type or print)

Name of organization or individual requesting space:

_____

Address: _____

_____

Please describe your proposed exhibit in the space below:
(Use separate sheet if necessary)

Amount of space required (width) _____ feet. All exhibit spaces will be six feet deep. SPECIAL ARRANGEMENTS will be made for small exhibits which do not require an entirely separate booth.

Submit your idea for consideration, using the Preliminary Application form below.

S. FULTON TOMPKINS, M.D.,
Chairman, Scientific Exhibits Committee

Requests for scientific exhibit space should be mailed to:

SCIENTIFIC EXHIBIT COMMITTEE,
OKLAHOMA STATE MEDICAL ASSOCIATION,
1227 Classen Drive,
Oklahoma City, Okla.

Closing date for filing applications: February 1, 1956. There will be no charge for booth space, but each applicant must bear all costs of installation and is solely responsible for such installation. The Oklahoma State Medical Association assumes no liability for the safety of exhibits. Exhibits will be installed on Sunday, May 6, 1956, and must be removed between 1:00 p.m. and 5:00 p.m. on Wednesday, May 9, 1956.

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January 16 - 21, 1956

Six full days —each day devoted to one area of practice

Monday — MEDICINE
Tuesday — PEDIATRICS
Wednesday — SURGERY
Thursday — PSYCHOSOMATIC MEDICINE
Friday — OBSTETRICS AND GYNECOLOGY
Saturday — FLUID AND ELECTROLYTE BALANCE

Register for the full course or for any part

For further information and detailed program, write to:

The Director of Postgraduate Medical Education

UNIVERSITY OF COLORADO MEDICAL CENTER

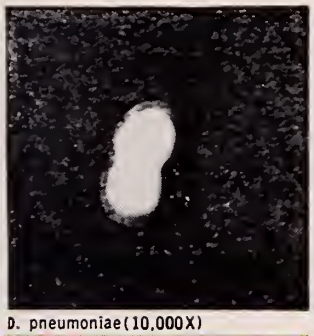
4220 East Ninth Avenue, Denver 20, Colorado

NOTE: Hotel and Motel reservations should be made early as accomodations will be very scarce due to the NATIONAL WESTERN STOCK SHOW held the same week. A limited number of evening seats will be available to registrants through this office.

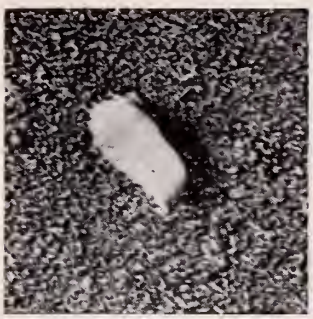
WRITE FOR A CALENDAR OF OTHER POSTGRADUATE COURSES

The organisms commonly involved in

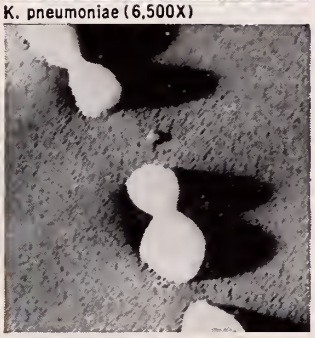
Pneumonia



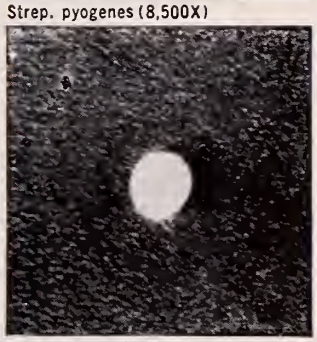
D. pneumoniae (10,000X)



K. pneumoniae (6,500X)



Strep. pyogenes (8,500X)



Staph. aureus (9,000X)

Upjohn

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100 mg., 250 mg., and 500 mg. vials, intravenous

*TRADEMARK, REG. U. S. PAT. OFF.—THE UPJOHN BRAND OF TETRACYCLINE

Have You Heard?

B. L. DIETRICH, M.D., Boise City, has been appointed Cimarron County superintendent of health.

RALPH MCGILL, M.D., Tulsa, has been elected treasurer of Oklahoma Blue Shield Board of Trustees to succeed James Stevenson, M.D., who died September 11.

W. K. WEST, M.D., Oklahoma City, was named first vice-president of the Southern Medical Association at the meeting held in Houston in November. This places him in line for the presidency of the organization. At the same meeting, Henry H. Turner, M.D., also of Oklahoma City, was named to the executive committee.

JACK BAXTER, M.D., Shawnee, has been promoted to the rank of full commander in the naval reserve. He is stationed at Will Rogers Field, Oklahoma City as senior medical officer of the armed forces examining and naval recruiting station.

C. E. LIVELY, M.D., McAlester, was installed as president of the University of Oklahoma Medical School Alumni Association, at a meeting held recently in Oklahoma City.

C. W. ROBERTSON, M.D., Chandler, attended the Western Heart Conference in Denver, Colo.

F. REDDING HOOD, M.D., Oklahoma City, has been named to the board of directors of the American Heart Association. He is a past president of the state organization.

CHARLES A. BECK, M.D., Lindsay, has moved into his new clinic in that city. An 11 room modernistic building, it includes laboratory, x-ray rooms, two examining rooms and a specially designed room for children. It was built at a cost of $50,000.

WILLIAM C. MOORE, M.D., formerly of Cobalt, Idaho, has opened his office in Wewoka.

BILL HARVEY, M.D., formerly of Marlow, has opened his practice in Konawa. He is a 1953 graduate of the University of Oklahoma School of Medicine.

L. C. KUYRKENDALL, M.D., McAlester, was recently advanced to the 33rd degree by the supreme council of Scottish Rite Masonry.

ALFRED T. BAKER, M.D., Durant, was the Oklahoma State Medical Association representative on the Oklahoma Industrial Tour.

JOHN BLENDER, M.D., Cherokee, was master of ceremonies at a recent Oklahoma State Nurses Association convention at Enid.

PAUL C. GALLAHER, M.D., Shawnee, recently opened his new Medical and Surgical Clinic in Shawnee. Constructed of coral brick, Arkansas cherry blend stone and glass, with aluminum trim, it contains 34,000 feet of floor space.

DON H. O'DONOGHUE, M.D., Oklahoma City, appeared on the program of the alumni association of the Hospital for Joint Diseases in New York City the latter part of October. He opened one session, moderated a symposium on the knee, participated in a panel and presented a paper entitled "A Comparative Analysis of Five Years of Knee Surgery."

WILLIAM H. ALDREDGE, M.D., CLAIR LIEBRAND, M.D., H. LEE OWEN, M.D. and BROCK R. WESTBROOK, M.D., have opened the new Hillcrest Clinic in Bartlesville.

Pictured above is E. F. Lester, M.D., Oklahoma City, new Secretary of the Board of Medical Examiners. He replaces Clinton Gallaher, M.D., Shawnee, who resigned. Other officers are W. Pat Fite, M.D., Muskogee, President (see picture October issue); and L. S. Willour, M.D., McAlester, vice-president.

Medical Societies Around the State

Tulsa County

Roscoe Walker, M.D. recently received a Life Membership certificate at a meeting of Tulsa County Medical Society (see picture this page). The presentation took place November 14, 1955, and Wilkie Hoover, M.D., Councilor, presented the certificate. Doctor Walker, who formerly lived in Pawhuska, now resides in Tulsa.

Garfield-Kingfisher

At a Garfield-Kingfisher County Medical Society meeting held recently at Oakwood Country Club, A. L. Ashmore, M.D., Wichita, was guest speaker. He discussed pulmonary malignancies and his discussion was supplemented by Dick Cline, M.D., radiologist of St. Francis Hospital at Wichita.

Creek County

Robert L. Anderson, M.D., Tulsa, spoke on "Diagnosis of Pulmonary Conditions" at a recent Creek County Medical Society meeting held at Bristow.

Oklahoma County

Oklahoma County Medical Society members participated in Diabetes Detection Week by holding a series of testing clinics at the Variety Club Health Center.

Carter County

At a dinner of the Carter County Medical Society, R. Q. Goodwin, M.D., OSMA President, presented 50 year pins to W. G. Hathaway, M.D., Lone Grove; J. L. Cox, M.D., Ardmore; and posthumously to E. R. Barker, M.D., Healdton. Mrs. Barker received Doctor Barker's pin.

HAVE YOU HEARD?

JOHN MILLER, assistant vice president, Trust Department, First National Bank and Trust Company, Oklahoma City, spoke on "Trusts, Estate Taxes and Wills" at a meeting of the East Central Oklahoma Medical Society held in Muskogee October 10.

Seeks Help in Heart Attack Survey

Dr. Paul Dudley White, Boston heart specialist, has asked his colleagues to help him find out how many other Americans have had heart attacks like that of President Eisenhower.

In a letter published in the current (Nov. 12) Journal of the American Medical Association, Dr. White asked physicians to send him information about their own cases of acute coronary thrombosis, which is more in the limelight than it ever was before the President's illness.

He asked the doctors to supply the following information:

The number of patients with unquestionable acute coronary thrombosis in their practices who became ill during the month following the President's attack—Sept. 24 to Oct. 23, 1955, inclusive; the sex, age, occupation, and national origin of each patient; and the length of time between onset of illness and any deaths.

Dr. White asked the physicians to answer even if they had had no cases during the period. He also asked them to give details about patients who became ill with coronary thrombosis before June 25, 1955.

PHYSICIAN PLACEMENT

The following physicians have expressed a desire to locate in Oklahoma. To the best of our knowledge, the names, addresses, qualifications and availability are current and accurate.

The asterisk beside some names indicates that additional information concerning the physician is available in this office.

Dermatology

Leonard D. Grayson, 1301 Cornaga Ave., Far Rockaway 91, N.Y. Age 34, medical school unknown (Grade A), Board Eligible in Dermatology, available immediately.

*John M. Knox, Dermatology Dept., University Hospital, Ann Arbor, Mich., age unknown, Baylor University 1949, Board eligible in Dermatology, veteran, available since February 1, 1955.

General Practice

*Ake Akerberg, Multragatan 20, Stockholm, NGBY, Sweden, age 38, University of Helsinki, Finland, available January, 1956.

*Charles Dail Davenport, 814 N. Elm, Hoisington, Kansas, age 30, University of Oklahoma School of Medicine, 1953, veteran, available July, 1956.

*John V. Hume, Wilmington General Hospital, Wilmington, Delaware, age 31, University of Colorado 1953, residency in general practice, veteran, availabilty unknown.

*William D. Stovall, Jr., Brodhead, Wisconsin, age 39, University of Wisconsin, 1944, veteran, available May 1, 1955.

Internal Medicine

*Marvin J. Colbert, Apt. 110, 809 S. Marshfield Ave., Chicago 12, Ill., age 31, University of Boston 1949, two and one-half years residency in internal medicine, veteran, available August 1, 1955.

*Robert Henry Frankenfeld, U. S. Naval Hospital, Quantico, Va., age 31, Cornell University 1947, Board eligible in Internal Medicine, active military duty, available October 1, 1955.

*William Prothro Jolly, 803 Fifth St., Rural Route No. 1, Iowa City, Iowa, age 32, University of Michigan, 1949, residency in internal medicine, veteran, available July 1, 1956.

*C. A. Loughridge, 1107 E. Upsal St., Philadelphia 19, Pa., age 36, College of Physicians and Surgeons Columbia University 1954, in internal medicine residency at Philadelphia General Hospital, available between July and September, 1956.

*Alfred M. Steinman, 515 Ocean Ave., Brooklyn 26, N. Y., age 32, Long Island College of Medicine 1949, residency in Internal Medicine and Cardiology, veteran, available immediately.

Orthopedics

*Andrew G. Hudacek, Kosair Crippled Children Hospital, Louisville 17, Kentucky, age 31, Georgetown University 1948, Board eligible in Orthopedics, veteran, available October 1, 1955.

Pathology

*James Kendall Boyd, 1745 S. St. Louis Ave., Tulsa, Okla., age 39, University of Tennessee 1942, Board eligible in Pathology, veteran, available immediately.

Pediatrics

*Arthur T. Hall, 314 Allison St., Sayre, Pa., age 33, University of Rochester 1952, two year residency in Pediatrics, veteran, available July 1, 1955.

*Leslie W. Langley, Jr., 1709 De Pauw Ave., New Albany, Ind., age 32, University of Louisville School of Medicine, 1953, now taking second year of pediatric residency, veteran, available July 1, 1956.

Ralph Lee Perry, 10812 Mt. Carmel Rd., Cleveland 4, Ohio, age 32, Western Reserve University, 1953, two years, appr. pediatric training, veteran, available July 1, 1956.

Surgery

Alice F. Gambill, 1605 Clover Lane, Fort Worth, Texas, University of Oklahoma 1949, one year residency in General Surgery, available immediately.

*William A. Holbrook, Jr., University Hospital, Baltimore, Maryland, age 34, University of Maryland 1945, Board qualified in General Surgery, veteran, available August, 1955.

*C. Richard Jernigan, Parkland Memorial Hospital, Dallas, Texas, age 29, Southwestern Medical College 1948, will be Board qualified in General Surgery Jan-

uary 1, 1956, veteran, available January 1, 1956.

*Chester T. Podgorski, 3926 N. Keeler Ave., Chicago, Ill., age 37, Loyola 1943, three year residency in General Surgery, veteran, available April 13, 1955.

Urology

Woodrow Payne, M.D., 764 McConnell, Memphis, Tenn., age 34, University of Tennessee, 1944. Board Qualified in Urology, veteran, available July, 1956. (Wants city 20,000-75,000 — private proup, partnership).

*David M. Stahl, 2624 W. 75th Pl., Kansas City 13, Missouri, age 28. Baylor College of Medicine 1952, in residency in urology, veteran, available July 1, 1956.

Banquet Honors Seven Doctors

Seven pioneer physicians in the Bartlesville area were honored recently at a banquet given by the Chamber of Commerce of Bartlesville. Approximately 300 persons attended.

Those honored were J. V. Athey, M.D., Elizabeth Chamberlin, M.D., William LeBlanc, M.D., W. H. Shipman, M.D., J. G. Smith, M.D., O. S. Somerville, M.D. and B. F. Staver, M.D. Doctor LeBlanc was also presented with a Life Membership certificate and 50 Year Pin. The presentation, made by R. Q. Goodwin, M.D., OSMA President, was made to Mrs. LeBlanc as her husband could not attend.

Reviews were given of each doctor's life and each physician responded with an amusing or unusual incident in their medical careers. The entire event was tape recorded by the Department of Archives of the University of Oklahoma for the history of medicine files.

Accompanying Doctor Goodwin to the Bartlesville event were Dick Graham. Executive Secretary, and Don Blair, Associate Executive Secretary.

Expansion In Psychiatry

The teaching of psychiatry has been expanded at the University of Oklahoma School of Medicine with the appointment of two more fulltime psychiatrists and the opening of the first 20 of 60 neuro-psychiatric beds at University Hospitals.

Although the neuro-psychiatric areas were built three years ago, it was not until this year that the legislature appropriated moneys to start operating the inpatient services.

With the opening of the 20 beds during August and the use of 114 affiliated beds at the Oklahoma City VA Hospital, the training of the first four psychiatric residents is under way. The psychiatric outpatient service, which has been opened for many years, will continue to expand as more beds are opened.

The two psychiatrists are Donald C. Greaves, M.D. and John Gussen, M.D.

Doctor Greaves was appointed Associate Professor of Psychiatry. A graduate of Washington University, St. Louis, he interned at Salt Lake General Hospital. Doctor Greaves completed his residency at the Payne Whitney Clinic in New York City and had been attending psychiatrist there immediately prior to his present appointment.

Doctor Gussen was appointed Assistant Professor of Psychiatry. A native of Sweden, Doctor Gussen received his M.D. degree from Columbia University's College of Physicians and Surgeons. He interned at New York Hospital and took resident work at the Payne Whitney Clinic. He was teaching at Stockholm's Karoline University Hospital before coming to Oklahoma.

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Survey Reveals Tulsans Have Family Physician, But Desire Emergency Call Plan

The results of an extensive health and medical survey of the City of Tulsa were announced recently by the Tulsa Council of Social Agencies, co-sponsors of the project.

The principal findings of the study which sampled 485 Tulsa families through the use of 18 trained interviewers, are:

1. Eighty-seven per cent of Tulsans have a regular doctor to whom they turn in times of illness.

2. Only 37 per cent of Tulsans have had a physical examination in the last year, and for 16 per cent of the group it has been three years or longer since the last physical check-up.

3. Only 32 per cent have had a chest x-ray in the last year although 74 per cent have had one at some time in the past. Sixty per cent of those who have never had a chest x-ray are over the age of 40.

4. Only 62 per cent of the children under six in the survey have been inoculated for diphtheria, whooping cough and tetanus.

5. Only 21 per cent of the children under six have been vaccinated for smallpox.

6. Nineteen per cent of Tulsans have had an actual medical emergency within the last year. Of this number, ten per cent experienced difficulty in promptly obtaining the services of a doctor. Eighty-three per cent of the informants were of the opinion that a system of assuring emergency medical care should be established in Tulsa. In analyzing the comments of the informants, however, it appears that few persons have experienced any difficulty in securing a doctor. The emergency medical call plan appears to be desired more as an element of community security than for its actual need.

7. Eighty-four per cent of Tulsans think a doctor should discuss his fees in advance.

8. Twenty-nine per cent of Tulsans think medical fees are too high.

9. Tulsans are more or less evenly divided about the preferred location of their doctor's office. Forty-six per cent favor a residential area location, 23 per cent favor downtown, and 31 per cent have no preference between the two.

10. Eighty-three per cent of persons having a member of their family hospitalized within the last year in a Tulsa hospital were satisfied with the service rendered.

11. The basic causes of dissatisfaction with services at Tulsa hospitals are: shortage of nurses, excessive cost of services, poor services generally (which included complaints of poor personal attention and an indifferent attitude by nurses and nurses aides), and noise from other parts of the hospital.

12. Thirty-two per cent of Tulsans think hospital charges at Tulsa hospitals are too high.

13. Eighteen per cent of Tulsa families have no health insurance of any type.

Medical details of the study were reviewed by a special committee from the Tulsa County Medical Society comprising Dr. John G. Matt, Chairman, Dr. Frank J. Nelson, Dr. Wilkie D. Hoover, Dr. Homer A. Ruprecht, and Dr. R. M. Wadsworth.

The basic purposes of the study were to determine the need for an emergency medical call plan in Tulsa, the extent to which preventive health measures are practiced by families, information about doctors' services and fees, and opinions of the public as to hospital costs and adequacy of care.

The results of the study have been published in a 26-page bound report, copies of which are available upon request of the Tulsa County Medical Society, B9 Medical Arts Building, Tulsa.

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Winthrop-Stearns Inc.
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Only the name is changed—nothing else.

This new name better indicates the nature
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DIODRAST® 70%
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DRISDOL® IN PROPYLENE GLYCOL
DRISDOL® WITH VITAMIN A DISPERSIBLE
EVIPAL® SODIUM
HYPAQUE® SODIUM
ISUPREL® HYDROCHLORIDE
LEVOPHED® BITARTRATE
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Book Review

PUBLIC RELATIONS IN MEDICAL PRACTICE. James E. Bryan. Williams & Wilkins Company, Publishers.

James E. Bryan has been working for and with medical doctors for more than 25 years, first as a lay executive for county and state medical societies and more recently as administrator of the New Jersey Blue Shield Plan. The product of this intimate association, intelligently interpreted from both the professional and lay point of view, is one of the finest and most useful works in the field of medical public relations yet written.

Public Relations In Medical Practice derives much of its soundness from an unbiased approach to the problem. It is no collection of platitudes about the medical profession; neither is it critical in the extreme. While the author has pulled no punches and wisely calls a spade a spade, the shortcomings of the profession are neither minimized or exaggerated. Rather, they are treated as clinical problems in which the success of the solution depends in largest measure upon the individual doctor. The physician-reader will quickly recognize Mr. Bryan's book for what it is: sensible, practical advice based on study and experience from a discerning and perceptive friend of the profession.

The book is first of all an informative book, a goldmine of information about the practical aspects of modern practice. Carefully leavened among these facts is a compilation of intelligent medical thinking on the doctor's public relations problems. Mr. Bryan has carefully divided his work into several basic divisions, each of which comprises an integral part of the doctor's socioeconomic order: the doctor and his patient, the doctor and his fee, the doctor and his office staff, the doctor and his colleagues, the doctor and his community, the doctor and his medical society, and the doctor and his hospital. Another section, almost previously untouched in the literature of medical public relations, deals with the doctor and prepaid insurance plans (in which the author, drawing upon his experience as a Blue Shield administrator, has set forth a remarkable summary of the doctor's role in prepaid insurance). Finally, a section entitled The Doctor and Himself reserves to the last some quiet but essential reflections about the human element in the modern medical doctor; in this philosophical vein author Bryan has summed up the basic factors of a successful medical practice and successful medical public relations—the physician himself, his personality, integrity, philosophy and humanness.

"Public relations for the doctor may be summed up as a matter of attitude," the author concludes, "the doctor's attitude towards his patient, his profession, his community, his job—and himself. His knowledge of physic, his acumen and skill in administering the marvelous scientific armamentarium that his forebearers have bequeathed him, will profit him and his patient little indeed if his spirit is not made humble and his hand made gentle by human compassion."

Public Relations In Medical Practice profits through a complete absence of any sectionalism in its thinking. Differences from one part of the country to another—particularly in matters of fees, physician relationships to each other, etc.—vary widely. Author Bryan has wisely avoided any extremes in these differences, sticking to accepted yet progressive standards.

The book does not hesitate to differ with some theories which are more or less inbred in the medical profession. The practice of charging what the traffic will bear, for instance, is characterized as "biological blackmail." The fallacious theory that fees should never be adjusted downward less the patient lose his respect for the doctor is spiked. Mr. Bryan speaks out against doctors who follow the "tell 'em nothing" school of thought in the question of how much to tell a patient; a situation of open-handed candor is desirable and compatible with good treatment, he suggests. Office "hours" where the doctor

makes no appointments but accepts patients on a "first come-first served" basis are obsolete; a surer way to better medical public relations is a system of appointments, effectively scheduled to eliminate long waiting room delays. How to overcome some of these habitual policies of the medical profession poses a great barrier to progressive public relations, Bryan believes, but admits the solution is not incapable of solution. New patterns of medical practice can and must come about if the profession is to keep pace with 20th Century progress.

Public Relations In Medical Practice is a "must" for every doctor. For both the veteran and for the young physician just entering practice, it offers probably the best compendium of advice and information yet prepared. Well written in a readable style, it presents itself as a standard work which should be read periodically by all doctors. Were a majority of American physicians to put its theroms into actual practice, the problem of medical public relations would vanish quietly into the oblivion from which it came.—Jack Spears.

O.S.M.A. Journal Personnel Attend Chicago Conference

Four representatives of the *Journal* of the Oklahoma State Medical Association attended the State Medical Journal Conference held at AMA headquarters in Chicago November 7-8. Those attending from Oklahoma were Ben H. Nicholson, M.D., Editor-in-Chief; Don Blair, Associate Business Manager; Mary Lou Crahan, Editorial Assistant; and Gene Nance of the Transcript Publishing Company.

The meeting was dividied into four workshops on format and makeup, editing, publishing costs, and advertising with outstanding discussants from the various fields directing the workshops. On the general analysis on format and makeup the Oklahoma Journal was among the top 11 state journals.

Held every two years, the conference is under the auspices of the Advisory Committee of the State Journal Advertising Bureau.

Governor Gary Endorses Rural Health Program

Governor Raymond Gary was the principal speaker at the Third Annual Rural Health Conference which was held in Norman November 29. Approximately 300 guests heard the Governor give his official endorsement of this worthwhile activity which is sponsored by the Oklahoma State Medical Association.

The purpose of this annual conference is to assist rural and small community people in securing maximum benefits from present day medical facilities. R. C. Emmott, M.D., Chairman of the Rural and School Health Committee, directed the planning of this year's program.

Topics which were discussed included a presentation on health facilities which are available in the state, a talk on relationship of good teeth to good health, a report on the progress of medical science and a panel discussion of specific health problems as related to rural areas. To supplement these verbal discussions, 12 organizations provided health exhibits which covered a variety of health subjects of general interest.

In addition to the Governor, other outstanding speakers were: Cleve Rodgers, Executive Director, Oklahoma Hospital Association; Mrs. Edith Wirick, R.N., President, Oklahoma State Nurses Association; F. Redding Hood, M.D., Chairman, Oklahoma Volunteer Advisory Committee to Selective Service; Grady F. Mathews, M.D., State Commissioner of Health; Dean Robertson, D.D.S., Oklahoma State Dental Association; Leonard P. Eliel, M.D., Oklahoma Medical Research Foundation; James O. Wails, M.D., State Epidemiologist; Donald F. Robinson, M.D., Student Health Service, University of Oklahoma; and C. A. Sebert, D.D.S., Oklahoma State Dental Association.

Other members of the Rural and School Health Committees are: F. C. Buffington, M.D., Norman; Homer Hardy, Jr., M.D., Tulsa; H. V. L. Sapper, M.D., Oklahoma City; C. W. Arrendell, M.D., Ponca City; Thomas E. Rhea, M.D., Idabel; and Charles Green, M.D., Lawton.

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The use of the Index will be greatly facilitated by remembering that articles are often listed under more than one heading. Scientific articles may be found under the name of the author and the various phases of the subject discussed as well as under the listing of Scientific Articles. Editorials and deaths are listed under the special headings as well as alphabetically.

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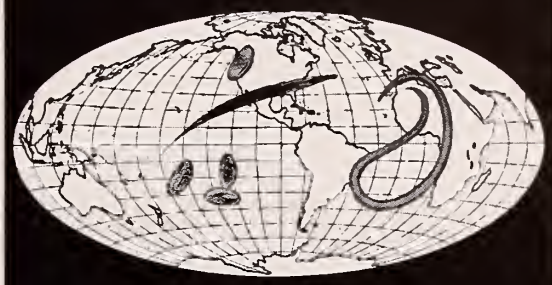

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Medical School Key Table

The following is a list of medical schools in the United States and Canada, existing and extinct, arranged chronologically by states and showing the key number by which each school is designated in the biographical section of this directory.

Existing approved schools are listed in black face type.

Schools listed in light face type cannot be evaluated until complete course is in operation, are extinct, have merged with other schools or are not approved.

ALABAMA

Ala.1—Graefenberg Medical Institute, Dadeville.
Ala.2—Med. Coll. of Alabama, Birmingham.
Ala.3—Southern Univ. Med. Dept., Greensboro.
Ala.4—Birmingham Medical College.
Ala.5—Med. Coll. Montezuma Univ., Bessemer.

ARKANSAS

Ark.1—Univ. of Ark. Sch. of Med., Little Rock.
Ark.2—College of Phys. and Surgs., Little Rock.
Ark.3—Bethel Med. Dept., Southwestern Univ., Little Rock.
Ark.4—Texas Health College, Hot Springs.
Ark.5—Sulphur Rock College Medical Department, Sulphur Rock.

CALIFORNIA

Calif. 1—Cooper Medical College, San Francisco.
Calif. 2—University of California Me. School, Berkeley-San Francisco.
Calif. 3—California Medical Society and College of Physicians, San Fran.
Calif. 4—Calif. Eclectic Med. Coll., L. A.
Calif. 5—Hahnemann Medical College of the Pacific, San Francisco.
Calif. 6—Univ. of Southern Calif. School of Med., Los Angeles.
Calif. 7—Coll. of Phys. and Surgs. of San Francisco.
Calif. 8—Oakland College of Med. and Surg.
Calif. 9—College of Physicians and Surgeons, Los Angeles.
Calif.10—West Coast Medical College of San Francisco.
Calif.11—Stanford Univ. School of Med., Stanford University-San Fran.
Calif.12—Coll. of Med. Evangelists, Loma Linda-Los Angeles.
Calif. 14—University of California School of Medicine at Los Angeles.

COLORADO

Colo.1—Denver College of Medicine.
Colo.2—Univ. of Colorado School of Med., Denver.
Colo.3—Gross Medical College, Denver.
Colo.4—Denver College of Phys. and Surgeons.
Colo.5—Denver and Gross Coll. of Med.

CONNECTICUT

Conn.1—Yale Univ. School of Med., New Haven.

DISTRICT OF COLUMBIA

D.C.1—George Washington Univ. School of Medicine, Washington.
D.C.2—Georgetown University School of Medicine, Washington.
D.C.3—Howard University College of Medicine, Washington.
D.C.4—National Univ. Med. Dept., Wash.
D.C.5—Washington Homeopathic Med. Coll.

FLORIDA

Fla.1—Tallahassee College of Medicine and Surgery, Jacksonville.
Fla.2—University of Miami School of Medicine, Coral Gables.

GEORGIA

Ga. 1—Medical College of Georgia, Augusta.
Ga. 2—Coll. of American Med. and Surg., Atlanta.
Ga. 3—Thomsonian College, Barbourville.
Ga. 4—Savannah Medical College.
Ga. 5—Emory Univ. School of Med., Emory University.
Ga. 6—Oglethorpe Med. Coll., Savannah.
Ga. 7—Reform Medical College, Macon.
Ga. 8—Coll. of American Med. and Surg., Atlanta.
Ga. 9—Ga. Coll. of Ecl. Med. and Surg., Atlanta.
Ga.10—Southern Medical College, Atlanta.
Ga. 11—Atlanta College of Phys. and Surg.
Ga.12—Atlanta School of Medicine.
Ga.13—Middle Georgia Med. Coll., Griffin.
Ga.14—Dalton Medical College, Dalton.
Ga.15—Clark University Med. Dept., Atlanta.
Ga.16—Woman's Med. Coll. of Georgia, Atlanta.
Ga.17—International Med. Missionary Coll., Atlanta.
Ga.18—Hospital Med. Coll., Eclectic, Atlanta.
Ga.19—South. Coll. of Med. and Surg., Atlanta.
Ga.20—Oglethorpe University School of Medicine, Atlanta.

ILLINOIS

Ill. 1—Rush Medical College, Chicago.
Ill. 1a—University of Chicago, The School of Medicine.
Ill. 2—Illinois Coll. Med. Dept., Jacksonville.
Ill. 3—Franklin Medical College, St. Charles.
Ill. 4—The Hahnemann Med. College and Hospital, Chicago.
Ill. 5—Coll. of Med. and Surg. (Ph.M.,) Chicago.
Ill. 6—Northwestern Univ. Med. School, Chicago.
Ill. 7—Edinburg University, Chicago
Ill. 8—Bennett Medical College, Chicago.
Ill. 9—Northwestern University Woman's Med. School, Chicago.
Ill.10—Chicago Homeopathic Med. Coll.
Ill.11—Univ. of Illinois Coll. of Med., Chicago.
Ill.12—Chaddock School of Med., Quincy.
Ill.13—Harvey Medical College, Chicago.
Ill.14—National Medical Univ., Chicago.
Ill.15—Hering Medical College, Chicago.
Ill.16—Jenner Medical College, Chicago.
Ill.17—Illinois Medical College, Chicago.
Ill.18—Dunham Medical College, Chicago.
Ill.19—American Med. Missionary Coll., Battle Creek, Mich and Chicago.
Ill.20—Chicago Coll. of Med and Surg., Ph.M.
Ill.21—Independ. Medical College, Chicago.
Ill.22—Chicago Coll. of Med. and Surg.
Ill.23—Dearborn Medical College, Chicago.
Ill.24—College of Physicians and Surgeons of the Upper Mississippi, Rock Island.
Ill.25—Northwestern College of Midwifery, Chicago.
Ill.26—Chicago College of Science.
Ill.27—National Univ. of Illinois, Chicago.
Ill.28—German Coll. of Med. and Obstetrics, Chicago.
Ill.29—German Homeopathic Med. Coll., Chicago.
Ill.30—German Medical College, Chicago.
Ill.31—German Academy of Psychiatric Physicians, Chicago.
Ill.32—German - American Homeopathic Med. Coll., Chicago.
Ill.33—German College of Gynecology, Pediatrics and Obstetrics, Chicago.
Ill.34—International Medical Missionary Institute, Chicago.
Ill.35—The American Health University, Chicago.
Ill.36—Illinois Standard Coll. of Med. and Surgery, Chicago.
Ill.37—Metropolitan Med. Coll., Chicago.
Ill.38—Dutton Medical College, Chicago.
Ill.39—Reliance Medical College, Chicago.
Ill.40—Scientific Medical Coll., Chicago.
Ill.41—Lombard College Med. Dept., Galesburg.
Ill.42—Chicago Medical School.
Ill.43—Stritch School of Med. of Loyola Univ., Chicago.
Ill. 44—The General Medical College, Chicago.

INDIANA

Ind. 1—Medical College of Indiana, La Porte.
Ind. 2—Medical College of Evansville.
Ind. 3—Indiana Central Med. Coll., Greencastle.
Ind. 4—Indiana Med. Coll., Indianapolis.
Ind. 5—Physio-Med. Coll. of Ind., Indianapolis.
Ind. 6—Coll. of P. and S. of Ind., Indianapolis.
Ind. 7—Medical College of Fort Wayne.
Ind. 8—Medical Coll. of Ind., Indianapolis.
Ind. 9—Central Coll. of P. and S., Indianapolis.
Ind.10—Fort Wayne College of Medicine.
Ind.11—Ind. Eclectic Med. Coll., Indianapolis.
Ind.12—Curtis Physio-Med. Institute, Marion.
Ind.13—Hospital Med. Coll. of Evansville.
Ind.15—Beach Medical Institute, Indianapolis.
Ind. 16—Eclectic Coll. of P. and S., Indianapolis.
Ind.17—Eclectic Med. Coll. of Ind., Indianapolis.
Ind.18—Ind. Med. Coll., School of Med. of Purdue Univ., Indianapolis.
Ind.19—American Med. Coll., Indianapolis.
Ind.20—Ind. Univ. School of Medicine, Bloomington-Indianapolis.
Ind.21—State Coll. of P. and S., Indianapolis.
Ind.23—Univ. of Indiana, New Albany.
Ind.24—Indiana Coll. of Med. and Midwifery, Indianapolis.
Ind.26—See Ind.12.
Ind.27—Univ. of Medicine, Indianapolis.

IOWA

Ia. 1—Coll. of Phys. and Surgs., Keokuk.
Ia. 2—Iowa Medical College, Keokuk.
Ia. 3—State Univ. of Iowa Coll. of Med., Iowa City.
Ia. 4—State Univ. of Iowa Coll. of Homeo. Med., Iowa City.
Ia. 6—Drake Univ. Coll. of Med., Des Moines.
Ia. 7—King Eclectic Med. Coll., Des Moines.
Ia. 8—Sioux City College of Medicine.
Ia. 9—Keokuk Medical College.
Ia.10—Keokuk Med. Coll., Coll. of P. and S.
Ia.11—Council Bluffs Medical College.
Ia.12—Iowa Coll. of Phys. and Surgs., Des Moines.

KANSAS

Kan.1—Kansas Med. Coll., Independence.
Kan.2—Univ. of Kansas School of Med., Lawrence-Kansas City.
Kan.3—Kansas Medical College, Topeka.
Kan.4—Coll. of Phys. and Surgs., Kansas City.
Kan.5—Wichita Medical College.
Kan.6—Kansas City Coll. of Med. and Surg.
Kan.7—Western Eclectic College of Med. and Surgery, Kansas City.

TITLES OF EXISTING APPROVED SCHOOLS ARE IN **BLACK FACE** TYPE

KENTUCKY

Ky. 1—Kentucky Sch. of Med., Louisville.
Ky. 2—Univ. of Louisville Sch. of Med.
Ky. 3—Eclectic Med. Coll., Louisville.
Ky. 4—Louisville Medical College.
Ky. 5—Hospital Coll. of Med., Louisville.
Ky. 6—Jefferson Sch. of Med., Louisville.
Ky. 7—Louisville National Med. College.
Ky. 8—Southwestern Homeopathic Med. Coll. and Hospital, Louisville.
Ky. 9—Kentucky Univ. Med. Dept., Louisville.
Ky.10—State Univ. Med. Dept., Louisville.
Ky.11—Louisville and Hospital Med. Coll.

LOUISIANA

La.1—Tulane Univ. of Louisiana School of Medicine, New Orleans.
La.2—New Orleans School of Medicine.
La.3—Charity Hosp. Med. Coll., New Orleans.
La.4—Flint Med. Coll. of New Orleans Univ., New Orleans.
La.5—Louisiana State Univ. Sch. of Med., New Orleans.

MAINE

Me.1—Bowdoin Med. School, Brunswick-Portland.
Me.2—Eclectic Med. Coll. of Maine, Lewiston.
Me.3—Druidic Univ. of Maine, Lewiston.

MARYLAND

Md. 1—Univ. of Md. School of Med. and and Coll. of Phys and Surgs. Baltimore.
Md. 2—Wash. Univ. School of Med, Baltimore.
Md. 3—Coll. of Phys. and Surgs. of Baltimore.
Md. 4—Baltimore Medical College.
Md. 5—Woman's Med. Coll. of Baltimore.
Md. 6—Baltimore Univ. School of Med.
Md. 7—Johns Hopkins Univ. School of Medicine. Baltimore.
Md. 8—Atlantic Med. Coll., Baltimore.
Md. 9—Maryland Med. Coll., Baltimore.
Md.10—Medico-Chirurgical and Theological College of Christ's Institution, Baltimore.
Md.11—Maryland Coll. of Eclectic Med. and Surg., Baltimore.

MASSACHUSETTS

Mass. 1—Harvard Med. School, Boston.
Mass. 2—Berkshire Med. Coll., Pittsfield.
Mass. 3—New Eng. Female Med. Coll., Boston.
Mass. 4—Worcester Med. Coll., Eclectic.
Mass. 5—Boston Univ. School of Med.
Mass. 6—College of Phys. and Surgs, Boston.
Mass. 7—Tufts Coll. Med. School, Boston.
Mass. 8—New England Univ. of Arts and Sciences, Boston.
Mass. 9—Bellevue Med. Coll. of Mass, Boston.
Mass.12—Excelsior Medical Coll., Boston.
Mass.13—Reserved College of Phys. and Surgs., Springfield.
Mass.14—Clark Univ. Med. Dept., Worcester.
Mass.15—Middlesex University School of Medicine, Waltham.

MICHIGAN

Mich. 1—Univ. of Michigan Med. School, Ann Arbor.
Mich. 2—Detroit Medical College.
Mich. 3—Detroit Homeopathic Med. Coll.
Mich. 4—Mich. Homeo Med. Coll., Lansing.
Mich. 5—Univ. of Michigan Homeo. Med. School, Ann Arbor.
Mich. 6—Michigan Coll. of Med., Detroit.
Mich. 7—Wayne Univ. College of Medicine, Detroit.
Mich. 8—Mich. Coll. of Med. and Surg., Detroit.
Mich. 9—Saginaw Valley Med. Coll., Saginaw.
Mich.10—Grand Rapids Medical College.
Mich.11—Detroit Homeopathic College.
Mich.12—Mich. Sch. of Homeo. and Surg., Detroit.
Mich.13—Mich. Eclectic Med. Coll., Detroit.
Mich.14—Detroit Univ. of Rational Med. and Surg.
Mich.15—Detroit University of Medicine.
Mich.16—Mich. Medical College, Lansing.

MINNESOTA

Minn.2—St. Paul Medical College.
Minn.3—Minnesota Hospital Coll., Minneapolis.
Minn.4—Univ. of Minnesota Med. School, Minneapolis.
Minn.5—Minneapolis Coll. of Phys. and Surgs.
Minn.6—Univ. of Minn. Coll. of Homeo. Med. and Surg., Minneapolis.

MISSISSIPPI

Miss.1—Univ. of Miss. School of Med., University.
Miss.2—Mississippi Med. Coll., Meridian.

MISSOURI

Mo. 1—Missouri Medical College, St. Louis.
Mo. 2—Washington Univ. School of Med., St. Louis.
Mo. 3—Univ. of Mo. School of Med., Columbia.
Mo. 4—Humboldt Medical Coll., St. Louis.
Mo. 5—Homeo. Med. Coll. of Missouri, St. Louis.
Mo. 6—St. Louis Coll. of Homeo. P. and S.
Mo. 7—St. Louis Coll. of Phys. and Surgs.
Mo. 8—Kansas City Medical College.
Mo. 9—Homeopathic Med. Coll. of St. Louis.
Mo.10—National Univ. of Arts and Sciences Med. Dept., St. Louis.
Mo.11—Medical College of Kansas City.
Mo.12—St. Louis Hahnemann Med. Coll.
Mo.13—St. Louis Eclectic Med. Coll.
Mo.14—St. Joseph Hospital Med. Coll.
Mo.15—Coll. of Phys. and Surgs., of St. Joseph.
Mo.16—Hering Med. Coll., St. Louis.
Mo.17—Joplin Coll. of Phys. and Surgs.
Mo.18—Northwestern Med. Coll., St. Joseph.
Mo.19—Joplin Medical College.
Mo.20—Univ. Med. Coll. of Kansas City.
Mo.21—Kansas City Hospital Coll. of Med.
Mo.22—Ensworth Med. Coll., St. Joseph.
Mo. 23—Woman's Med. Coll., St. Louis.
Mo.24—Beaumont Hosp. Med. Coll., St. Louis.
Mo.25—St. Louis Hygienic Coll. of P. and .S
Mo.26—Kansas City Homeo. Med. Coll.
Mo.27—Marion-Sims Coll. of Med., St. Louis
Mo.28—Barnes Med. Coll., St. Louis.
Mo.29—Central Med. Coll. of St. Joseph.
Mo.30—Woman's Med. Coll., Kansas City.
Mo.31—Hahn. Med. Coll. of the Kansas City Univ., Kansas City.
Mo.32—Medico Chirurgical Coll. of Kansas City.
Mo.33—Eclectic Med. Univ., Kansas City.
Mo.34—St. Louis University School of Med.
Mo.35—Southwest School of Med. and Hosp., Kansas City.
Mo.36—Occidental Coll. of P. and S., Joplin.
Mo.37—St. Louis Woman's Med. Coll.
Mo.38—Missouri Ecl. Med. Coll., Kansas City.
Mo.39—American Anthropol. Univ. of St. Louis.
Mo.40—Hippocratean Coll. of Med., St. Louis.
Mo.41—Columbian Med. Coll., Kansas City.
Mo.42—Missouri Sch. of Midwifery and Dis. of Women and Children, St. Louis.
Mo.43—Kansas City Coll. of Med. and Surg.
Mo.44—Kansas City Univ. of Phys. and Surgs.

NEBRASKA

Neb.1—Univ. of Neb. Coll. of Med., Reg., Lincoln.
Neb.2—Univ. of Neb. Coll. of Med., Eclectic, Lincoln.
Neb.3—Univ. of Neb. Coll. of Med., Homeopathic, Lincoln.
Neb.4—Lincoln Medical College, Eclectic.
Neb.5—Univ. of Neb. Coll. of Med., Omaha.
Neb.6—Creighton Univ. Sch. of Med., Omaha.
Neb.7—Neb. College of Medicine, Lincoln.
Neb.8—Neb. Medical College, Ecl., Lincoln.

NEW HAMPSHIRE

N.H.1—Dartmouth Med. School, Hanover.
N.H.2—New Eng. Univ. of Arts and Sciences, Manchester.
N.H.3—Univ. of N. H. Dept. of Med., Nashua.

NEW JERSEY

N.J.1—Hygeio-Therapeutic Coll., Bergen Hts.
N.J.2—Med. and Surg. College of the State of New Jersey.
N.J.3—Livingston Univ., Haddonfield.
N.J.4—Central Univ. of Med. and Science, Jersey City.

NEW YORK

N.Y. 1—Columbia Univ. Coll. of Phys. and Surgs., New York.
N.Y. 2—Coll. of Phys. and Surgs of the Western District of New York, Fairfield.
N.Y. 3—Albany Medical College.
N.Y. 4—Geneva Medical College.
N.Y. 5—New York Univ. Med. Coll., N. Y.
N.Y. 6—Univ. of Buffalo School of Med.
N.Y. 7—New York Med. Coll., New York.
N.Y. 8—State Univ. of New York Coll. of Med. at New York City, Brooklyn.
N.Y. 9—New York Med. Coll., Flower and Fifth Avenue Hospitals, N. Y.
N.Y.10—Bellevue Hosp. Med. Coll., N. Y.
N.Y.11—New York Med. Coll. and Hosp. for Women, New York.
N.Y.12—Regents of Univ. of State of N. Y.
N.Y.13—Ecl. Med. Coll. of the City of N. Y.
N.Y.14—Woman's Med. Coll. of the N. Y. Infirmary for Women and Child., New York.
N.Y.15—State Univ. of New York Coll. of Med. at Syracuse, Syracuse.
N.Y.16—United States Med. Coll., N. Y.
N.Y.17—Coll. of P. and S., Homeo. Buffalo.
N.Y.18—Niagara Univ., Med. Dept., Buffalo.
N.Y.19—New York University College of Medicine, New York.
N.Y.20—Cornell Univ. Med. Coll., New York
N.Y.21—Med. Faculty of Rutger's (Queen's) College, New York.
N.Y.22—N. Y. Reformed Med. Coll., Eclectic, New York.
N.Y.23—New York Sch. of Med., N. Y.
N.Y.24—Coll. of Med., Botanic, New York.
N.Y.26—Ecl. Med. Inst. of N. Y., Rochester
N.Y.27—Randolph Ecl. Med. Inst., Rochester.
N.Y.28—Rochester Eclectic Med. Coll.
N.Y.29—Syracuse Med. Coll., Ecl., Syracuse
N.Y.30—Metropolitan Med. Coll., Ecl., New York.
N.Y.31—Excelsior Med. Coll., New York.
N.Y.32—N. Y. Hygeio-Therap. Coll., N. Y.
N.Y.33—Amer. Coll. of Med. Science, N. Y.
N.Y.35—N. Y. Free Med. Coll. for Women, N. Y.
N.Y.36—Buffalo Coll. of Rational Med., Homeo.
N.Y.37—Mohawk Med. Coll., Buffalo.
N.Y.38—Hamburg Canal Coll., Buffalo.
N.Y.39—Med. and Surg. Institute and Sanitarium, Buffalo.
N.Y.40—N. Y. Coll. of Magnetics, N. Y.
N.Y.41—N.Y. Inst. of Med. Science, N. Y.
N.Y.42—Preparatory Med. Coll., New York and Poughkeepsie.
N.Y.43—Fordham Univ. Sch. of Med., N.Y.
N.Y.44—Edward Med. Coll., N. Y.
N.Y.45—Univ. of Rochester School of Med. and Dentistry.

NORTH CAROLINA

N.C.1—Univ. of N. C. Sch. of Med., Chapel Hill.
N.C.2—Edenborough Med. Coll., Edenborough Community, Robeson County (Hoke).
N.C.3—Leonard Med. School, Raleigh.
N.C.4—N. Carolina Med. Coll., Charlotte.
N.C.5—Bowman Gray Sch. of Med. of Wake Forest Coll., Winston-Salem.
N.C.7—Duke Univ. Sch. of Med., Durham.
N.C.8—Coll. of Phys. and Surgs., Wilmington.

NORTH DAKOTA

N.D.1—Univ. of N. D. Sch. of Med., Grand Forks.

OHIO

O. 1—Med. Coll. of Ohio, Cincinnati.
O. 2—Eclectic Med. Coll., Cincinnati.
O. 3—Starling Med. College, Columbus.
O. 4—Physio-Medical Coll., Cincinnati.
O. 5—Botanico-Med. Coll. of Ohio, Cincinnati.
O. 6—Western Reserve Univ. School of Med., Cleveland.
O. 7—Cleveland Univ. of Med. and Surg.
O. 8—Cincinnati Coll. of Med. and Surg.
O. 9—Miami Med. Coll., Cincinnati.
O.10—Physio-Med. Inst., Cincinnati.
O.11—Univ. of Wooster, Med. Dept., Cleveland.
O.12—Cleveland Coll .of Phys. and Surgs.
O.13—Pulte Med. Coll., Cincinnati.
O.14—Columbus Medical College.
O.15—Physio-Eclectic Med. Co., Cincinnati.
O.16—Amer. Eclectic Med. Coll., Cincinnati.
O.17—Med. Univ. of Ohio, Cincinnati.
O.18—Northwestern Ohio Med. College, Toledo.
O.19—Toledo Medical College.
O.20—Woman's Med. Coll., Cincinnati.
O.21—Laura Memorial Woman's Med. Coll., Cincinnati.
O.22—National Normal Univ., Coll. of Med., Lebanon.
O.23—Cleveland Med. Coll., Homeopathic.
O.24—Presbyterian Hospital and Woman's Med. Coll., Cincinnati.
O.25—Ohio Med. Univ., Columbus.
O.26—Cleveland-Pulte Medical College.
O.27—Cincinnati Medical College.
O.28—Willoughby Univ. Med. Dept.
O.30—American Coll., Eclectic, Cincinnati.
O.31—Ecl. Coll. of Med. and Surg., Cincinnati.
O.32—International Electropathic Inst., Mentor.
O.33—Homeo. Med. Coll. for Women, Cleveland.
O.34—American Health Coll., Cincinnati.
O.35—Zanesville Academy of Medicine.
O.36—Toledo School of Medicine.
O.37—Dayton Medical University.
O.38—Ohio Coll. of Obstetrics, Medicine and Midwifery, Cincinnati.
O.39—Hygeia Medical Coll., Cincinnati.
O.40—Ohio State Univ. Coll. of Med., Columbus.
O.41—Univ. of Cincinnati Coll. of Med.
O.42—Ohio State Univ. Coll. of Homeo Med., Columbus.

OKLAHOMA

Okla.1—Univ. of Okla. School of Med., Oklahoma City.
Okla.2—Epworth Coll. of Med., Oklahoma City.
Okla.3—Twentieth Century Physio-Med. College, Guthrie.
Okla.4—Okla. Med. Coll., Okla. City.

OREGON

Ore.1—Willamette Univ. Med. Dept., Salem
Ore.2—Univ. of Ore. Med. Sch., Portland.

PENNSYLVANIA

Pa. 1—Univ. of Pa. Sch. of Med., Philadelphia.
Pa. 2—Jefferson Med. Coll. of Philadelphia
Pa. 3—Pennsylvania Med. Coll., Philadelphia.
Pa. 4—Philadelphia Coll. of Med. and Surg.
Pa. 5—Franklin Med. Coll., Philadelphia.
Pa. 6—See Pa.9.
Pa. 7—Woman's Med. Coll. of Pa., Philadelphia.
Pa. 8—Penn Med. Univ., Philadelphia.
Pa. 9—Hahnemann Med. Coll. and Hosp. of Philadelphia.
Pa.10—Lincoln Univ. Med. Dept., Oxford.
Pa.11—Medico-Chirurgical Coll. of Philadelphia.
Pa.12—Univ. of Pittsburg Sch. of Med.
Pa.13—Temple Univ. Sch. of Med., Philadelphia.
Pa.14—Philadelphia Univ. of Med. and Surg.
Pa.15—North American Acad. of the Homeo. Healing Art, Allentown.
Pa. 16—Amer. Univ. of Pa., Eclectic, Philadelphia.
Pa.17—Eclectic Med. Coll. of Pa., Philadelphia.
Pa.18—Hahnemann Med. Coll. of Philadelphia.
Pa.19—Electropathic Inst., Philadelphia.
Pa.20—Thomsonian Med. Coll., Allentown.

RHODE ISLAND

R.I.1—Brown Univ. Med. Dept., Providence

SOUTH CAROLINA

S.C.1—Medical College of S. C., Charleston.
S.C.2—Univ. of S. C. Med. Dept., Columbia
S.C.3—Charleston Medical School.

SOUTH DAKOTA

S.D.1—Univ. of S. D. School of Medical Sciences, Vermillion.

TENNESSEE

Tenn. 1—Univ. of Nashville Med. Dept.
Tenn. 2—Memphis Medical College.
Tenn. 3—Eclectic Med. Institute, Memphis.
Tenn. 4—Shelby Med. Coll., Nashville.
Tenn. 5—Vanderbilt Univ. Sch. of Med., Nashville.
Tenn. 6—Univ. of Tenn. Coll. of Med., Memphis.
Tenn. 7—Meharry Med. Coll., Nashville.
Tenn. 8—Memphis Hosp. Med. Coll.
Tenn. 9—Chattanooga Medical College.
Tenn.10—Lincoln Memorial Univ. Med. Dept., Knoxville.
Tenn.11—University of the South Med. Dept., Sewanee.
Tenn.12—Knoxville College Med. Dept.
Tenn.13—Knoxville Medical College.
Tenn.14—Univ. of West. Tennessee Coll. of Med. and Surg., Memphis.
Tenn.15—Coll. of Phys. and Surgs., Memphis.
Tenn.16—Jefferson Med. Ass'n, Dandridge.
Tenn.17—Hannibal Med. Coll., Memphis.
Tenn.18—Chattanooga National Med. Coll.
Tenn.19—Univ. of Nashville and Tennessee Medical Dept., Nashville.

TEXAS

Tex. 1—Texas Med. Coll. and Hosp., Galveston.
Tex. 2—Univ. of Tex. School of Medicine, Galveston.
Tex. 3—Fort Worth School of Medicine.
Tex. 4—Baylor Univ. Coll. of Med., Houston.
Tex. 5—Physio-Med. Coll. of Texas, Dallas
Tex. 6—Southern Methodist Univ. Med. Dept., Dallas.
Tex. 7—Gate City Med. Coll., Dallas.
Tex. 8—Coll. of Phys. and Surgs., Dallas.
Tex. 9—Univ. of San Antonio Med. Dept.
Tex.10—Dallas Medical College.
Tex.11—University of Med. and Surg., Dallas.
Tex.12—Southwestern Med. School of the Univ. of Texas, Dallas.

UTAH

Utah1—Univ. of Utah School of Med., Salt Lake City.
Utah2—Med. Coll. of Utah, Morgan City.

VERMONT

Vt.1—Castleton Medical College.
Vt.2—Univ. of Vt. Coll. of Med., Burlington.
Vt.3—Vermont Med. Coll., Woodstock.
Vt.4—Vermont Med. Coll., Rutland.
Vt.5—Trinity Univ. Coll. of Med. and Surg. of The State of Vermont, Bennington.
Vt.6—Union Med. Institute, Newberry.

VIRGINIA

Va.1—Univ. of Virginia Dept. of Med., Charlottesville.
Va.2—Med. School of the Valley of Virginia, Winchester.
Va.3—Winchester Medical College.
Va.4—Med. Coll. of Virginia, Richmond.
Va.5—Randolph Macon Coll. Med. Dept., Prince Edward Court House.
Va.6—University Coll. of Med., Richmond.

WASHINGTON

Wash.1—Univ. of Wash. Med. Dept., Seattle.
Wash.2—Northwestern Coll, of Biochemistry, Spokane.
Wash.3—Univ. of Spokane Falls Coll. of Med., Spokane.
Wash.4—Univ. of Washington School of Med., Seattle.

WEST VIRGINIA

W.Va.1—West Virginia University School of Med., Morgantown.

WISCONSIN

Wis.1—Milwaukee Coll. of Phys. and Surgs.
Wis.2—Wisconsin Coll. of P. and S., Milwaukee.
Wis.3—Milwaukee Medical College.
Wis.4—Wisconsin Eclectic Medical School, Milwaukee.
Wis.5—Univ. of Wis. Med. Sch., Madison.
Wis.6—Marquette University School of Med., Milwaukee.

CANADA

ALBERTA

Alta.1—Univ. of Alberta Faculty of Med., Edmonton.

BRITISH COLUMBIA

B.C.1—Univ. of British Columbia, Faculty of Med., Vancouver.

MANITOBA

Man.1—Univ. of Manitoba Faculty of Med., Winnipeg.

NOVA SCOTIA

N.S.1—Dalhousie Univ. Faculty of Med., Halifax.

ONTARIO

Ont.1—Univ. of Toronto Faculty of Med.
Ont.2—Toronto School of Medicine.
Ont.3—Medical Faculty of Trinity Univ., Toronto.
Ont.4—Victoria Univ. Med. Dept., Coburg.
Ont.5—Queen's Univ. Faculty of Med., Kingston.
Ont.6—Univ. of Western Ontario Faculty of Med., London.
Ont.7—Kingston Woman's Med. Coll.
Ont.8—Ontario Med. Coll. for Women, Toronto.
Ont.9—Univ. of Ottawa Faculty of Med., Ottawa.

QUEBEC

Que.1—McGill Univ., Faculty of Med., Montreal.
Que.2—University of Montreal Faculty of Med.
Que.3—Laval Univ. Faculty of Med., Quebec.
Que.4—Laval Univ. Med. Faculty, Montreal
Que.5—Univ. of Bishop College Faculty of Medicine, Montreal.
Que.6—St. Lawrence School of Medicine.

SASKATCHEWAN

Sask.1—University of Saskatchewan School of Medicine, Saskatoon.

PUERTO RICO

P.R.1—University of Puerto Rico School of Med., San Juan.

FOREIGN SCHOOLS

Aust.7—Univ. Vienna Med. School.
Germ.3—Univ. of Germany.
Leb.1—Amer. Univ. of Beirut.
Italy6—Univ. of Florence, Italy.
Germ.11—Univ. of Jena, Germany.

Alphabetical Membership Roster

as of December 31, 1954

Listings are explained as follows: name, year of birth, medical school and year of graduation, specialty if any, and address. Specialties shown are as designated by the physician himself. Key to specialties and special membership classifications are as follows:

Al	Allergy	**N**	Neurology	**PM**	Physical Medicine
ALR	Otology, Laryngology, Rhinology	**NS**	Neurological Surgery	**PN**	Psychiatry-Neurology
An	Anesthesiology	**OALR**	Ophthalmology, Otology, Laryngology, Rhinology	**Pr**	Proctology
Ba	Bacteriology	**Ob**	Obstetrics	**Pu**	Pulmonary Diseases
C	Cardiovascular Diseases	**OG**	Obstetrics and Gynecology	**R**	Roentgenology-Radiology
CP	Clinical Pathology	**Op**	Ophthalmology	**S**	Surgery
D	Dermatology	**Or**	Orthopedic Surgery	**U**	Urology
G	Gynecology	**P**	Psychiatry		
Ge	Gastroenterology	**Pa**	Pathology	[1]Application Pending	
HAd	Hospital Administration	**Pd**	Pediatrics	[2]Associate Member	
I	Internal Medicine	**PH**	Public Health	[3]Honorary Member	
Ind	Industrial Practice	**Pl**	Plastic Surgery	[4]Junior Member	
				[5]Life Member	

—A—

Aberlarde, Jose F. '98 Ok-1 '30 Waurika
Abernethy, E. A. '79 Ky-1 '07 **OALR** Altus
Abernethy, J. H. '12 Ok-1 '39 **OALR** Altus
Abshier, A. Brooks '04 Tex-4 '31 **D** 1200 N Walker OC
Adams, F. M. '84 Mo-28 '09 **P** Vinita
Adams, Felix M. Jr. '14 NC-7 '39 Mil Serv
Adams, George M. '16 Ok-1 '43 **An** 1419 E 15 Tulsa
Adams, Robert H. '96 Neb-6 '29 **Ind** 515 NW 11 OC
Adelman, Frank L. '17 Ok-1 '43 **PN** Fort Supply
Akin, Robert H. '04 Ok-1 '28 **U** 610 NW 9 OC
Akins, Jack O. '10 Ark-1 '39 **U** Med Arts Bg Tulsa
Albers, Donald D. '18 Ill-6 '43 **U** 301 NW 12 OC
Aldredge, Wm. M. '15 Ok-1 '41 **S** Union Natl Bk Bg Bartlesville
Alexander, C. J. '00 Mo-2 '24 Clinton
Alexander, E. T. '97 Ok-1 '20 **Ind** Barnsdall
Alexander, Jack '22 Tex-4 '46 **U** 115 Patton Dr Ponca City
[5]Alexander, Lin '74 Tenn-8 '03 Okmulgee
Alexander, Robert Lin '10 Tenn-6 '34 Okmulgee
[3]Alford, J. M. '71 La-1 '95 1521 N Shartel OC
Allen, Charles Curtis '87 Mo-2 '15 Frederick
Allen, C. W. '19 Ok-1 '44 **NS** 1635 E 15 Tulsa
Allen, George T. '08 Ok-1 '32 **OG** 1200 N Walker OC
Allen, Robert G. '18 La-1 '43 412 E 2 Bartlesville
Allen, Virginia S. '18 La-1 '43 **An** 1815 S View Dr Bartlesville
[2]Alley, Ralph M. '01 Pa-2 '27 801 N Vassar Albuquerque NM
Allgood, E. A. '19 Ok-1 '45 Snyder
Allgood, E. J. '05 Ok-1 '30 Altus
Allgood, J. M. '96 Ok-1 **OG** Altus
Allison, John S. '67 Tenn-5 '95 **S** Tahlequah
Alston, William C. Jr. '13 Ok-1 '37 **S** Med Arts Bg Tulsa
[4]Ambrister, Jerome W. '16 Ok-1 '43 321 W Hill, Decatur Ga
Amen, E. M. '20 Neb-5 '50 410 E 2 Bartlesville
Amspacher, James '15 Ok-1 '43 **Or** 525 NW 11 OC
Andelman, S. Y. '14 NY-6 '41 **I** Utica Sq Med Ctr Tulsa
[5]Anderson, Fred A. '78 Ky-4 '03 Claremore
Anderson, H. R. '07 Ok-1 '34 Watonga
Anderson, Hubert M. '16 Ok-1 '42 **Pl** 1212 N Hudson OC
Anderson, Paul S. '09 Ok-1 '35 Fort Supply
Anderson, Robert L. '16 Kan-2 '42 **Pu** 3102 S. Harvard Tulsa
Anderson, Roy W. '07 Ok-1 '39 Cordell
Anderson, W. D. '06 Ok-1 '31 Claremore
[5]Andreskowski, W. T. '93 Ok-1 '19 Elk City
Andrews, Martin H. '25 Kan-2 '52 4725 N May OC
Angus, Donald A. '07 Ok-1 '33 614 C St Lawton
[5]Angus, Haney A. '75 Ia-3 '03 614 C St Lawton
Angus, Howard '12 Ok-1 '38 614 C St Lawton
Annadown, Paul V. '83 Kan-2 '14 Sulphur
Annadown, Ruth '10 Ok-1 '46 **Al** Med Arts Bg OC
Anspaugh, R. D. '14 Tenn-6 '42 **OG** 1200 N Walker OC
Appleton, M. M. '08 Ok-1 '34 **U** 610 NW 9 OC
Archer, Homer V. '19 Ok-1 '43 1220 N Walker OC
Armstrong, Nolen L. '17 Mo-34 '48 4725 N May OC
Armstrong, O. C. '97 Ill-6 '25 Med Arts Bg Tulsa
Armstrong, W. O. '96 Ok-1 '24 **Ind** Continental Oil Co Ponca City
Arrendell, C. W. '91 La-1 '14 115 Patton Dr Ponca City
[4]Arrendell, Cad Walder '17 Ok-1 '45 Ochsner Clinic New Orleans La

Arrendell, Eugene H. '18 Ok-1 '43 **OG** 115 Patton Dr Ponca City
Arthur, Mary E. '27 Ark-1 '52 Student Health Serv Norman
Asher, James O. '07 Ok-1 '41 **S** Mil Serv
Atchley, R. Q '90 O-2 '17 **S** Med Arts Bg Tulsa
[5]Athey, J. V. '72 O-2 '99 521 S Cherokee Bartlesville
Atkins, Charles N. '11 Tenn-7 '50 624 NE 4 OC
Atkins, Paul N. Jr. '14 Tenn-6 '39 **S** Braniff Bg Tulsa
Atkins, Paul N. Sr. '89 D C-2 '12 Med Arts Bg Tulsa
Atkins, W. H. '07 Tenn-6 '30 **An** 821 Brooks Norman
Austerman, Warrington '18 NY-3 '44 Konowa
Austin, Frank H. '22 Ok-1 '46 **I** 1202 Arlington Lawton
Avey, H. Thompson '16 Wis-5 '39 **I** 437 NW 12 OC
Aycock, Byron W. '15 Ok-1 '40 **ALR** 1002 Gore Blv Lawton

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Bacon, O. G. '80 Ky-2 '07 Frederick
Bailey, Byron L. '24 Ok-1 '47 **R** Utica Sq Med Ctr Tulsa
Bailey, Carl H. '09 Ok-1 '33 Stroud
Baker, A. T. '05 Ky-2 '31 Durant
Baker, Charles E. '21 Ok-1 '51 Granite
Baker, F. P. '89 Ark-1 '12 **Pu** Talihina
Baker, J. Howard, Jr. '17 Ark-1 '43 Eufaula
Baker, L. V. '00 Ok-1 '25 Elk City
Baker, Marguerite M. '92 Ok-1 '27 1200 NE 63 OC
[3]Baker, Roscoe C. '82 Mo-22 '04 1223 W Maine Enid
Bakken, Richard L. '23 Ok-1 '49 Bristow
Ballantine, H. T. '81 Tenn-5 '07 **I** Manhattan Bg Muskogee
Balyeat, Ray M. '89 Ok-1 '18 **Al** Med Arts Bg OC
Bank, Edward W., Jr. '15 Ill-6 '42 **Or** Bdwy Tower Enid
[5]Barber, George S. '83 Ill-1 '08 409 A Ave Lawton
Barham, J. H. '86 Ark-1 '14 Daniels Bg Tulsa
[5]Barker, E. R. '77 Mo-33 '06 Healdton
Barker, Marcus S. '26 Ok-1 '48 **P** Leonhardt Bg OC
Barkett, N. F. V. '15 Ok-1 '39 **S** Med Arts Bg OC
Barnes, Harry E. '10 Ok-1 '35 Choctaw
Barnes, Lynn C. Jr. '26 Ok-1 '52 Nowata
Barrett, Harle Virgil '17 Kan-2 '46 **PH** PO Box 1959 Ponca City
Barry George N. '00 Mo-2 '30 **I** 1214 N Hudson OC
Bartheld, Floyd T. '04 Ill-6 '32 **S** Med Arts Bg McAlester
Bassett, Clifford M. '04 Ok-1 '30 **S** Cushing
Batchelor, John J. '95 Conn-1 '24 Med Arts Bg OC
Bate, Charles J. '14 Tenn-7 '38 **S** 352½ N Greenwood Tulsa
Bates, C. E. '94 Ok-1 '20 **HAd** 921 NE 13 OC
Baugh, Harold T. '99 Ok-1 '30 Meeker
Baxter, George S. '79 Tenn-8 '05 624 N Bdwy Shawnee
Baxter, Jack W. '18 Tex-4 '43 **S** Mil Serv
Bayless, James M. '21 Ok-1 '47 Mil Serv
Bayley, Robert H. '06 Ga-5 '31 **I** 800 NE 13 OC
Baylor, Richard A. '06 Ia-3 '29 425 NW 12 OC
Baze, Walter J. '83 Tex-4 '12 Okla Natl Bk Bg Chickasha
Bealor, John Albert '10 Pa-13 '37 **P** Central State Hosp Norman
Beaty, Charles S. '05 Ok-1 '35 **An** 2211 Callahan Muskogee
Beck, Charles Edward '21 Ok-1 '52 Lindsay
Becker, Fred W. '13 Ok-1 '46 **OG** Altus
Becker, L. H. '97 Kan-2 '26 Blackwell
Bednar, Gerald '11 Ok-1 '40 **D** Med Arts Bg OC
Beechwood, E. E. '98 Neb-6 '23 **S** Med Cen Bartlesville
Behrman, James Milton '17 Tex-12 '44 **P** Central State Hosp Norman
Bell, A. H. '04 Tenn-5 '29 **Pu** 301 NW 12 OC
Bell, Eugene S. '23 Ok-1 '52 Tishomingo
[4]Bell, James P. '22 Ok-1 '52 **Or** 605 NW 10 OC
Bell, Joseph Price '20 Ok-1 '43 3409 W 20 Topeka Kan
Beller, Cleve '19 Ok-1 '43 Okmulgee
Benjegerdes, Theodore D. '00 Ia-3 '25 **OALR** Alva
Bennett, Henry G. Jr. '13 Md-7 '36 **G** 1111 N Lee OC
Bennett, Howard A. '19 Ia-3 '43 **An** 801 NE 13 OC
Benson, Charles L. '18 NC-7 '43 **S** Cherokee
Benton, Paul C. '11 Minn-4 '36 **P** Box 4014 Tulsa
Benzing, William M. '09 Ill-1 '37 **R** Med Arts Bg Tulsa
Berg, Milton Louis '16 Mass-1 '41 3505 S Peoria Tulsa
[4]Berger, E. Stanley '17 Ok-1 '44 509 NW 32 OC
[4]Berkenbile, Glenn Lee '22 Ok-1 '46 Parkland Hosp Dallas Tex
Bernell, William '10 Ok-1 '42 Hobart
Berry, Charles N. '92 NY-1 '16 Med Arts Bg OC
Berry, Curtis '07 Ok-1 '37 231 S Peters Norman
[5]Berry, Thomas M. '74 Ky-1 '98 Eldorado
Bevill, S. D. '86 Ark-1 '11 **S** Poteau
Bielstein, C. M. '15 Tex-4 '41 **Pd** 301 NW 12 OC
Binder, Harold J. '10 Mass-7 '35 **PN** 1220 N Walker OC
Binkley, J. G. '80 Ok-1 '17 Municipal Bg OC
Binkley, J. Samuel '08 Mass-1 '32 **S** Med Arts Bg OC
Bird, Robert M. '15 Va-1 '39 **I** 800 NE 13 OC
Bischoff, Paul A. '16 O-6 '42 **OG** 604 S. Cinn Tulsa
[3]Bitting, B. T. '67 Md-4 '95 1721 W Maine Enid
Blachly, Lucile Spire '83 Ill-1 '16 **I** 2752 NW 18 OC
Black, Harold J. '00 Ia-3 '25 **S** Med Arts Bg Tulsa
Blackmer, L. G. '81 Ill-1 '04 Hooker
Blair, Cilfford J. '12 Ok-1 '39 **OALR** 1200 N Walker OC
[1]Blankenship, John F. '20 Tenn-6 '53 6423 E Archer Tulsa
Blender, John X. '15 Ok-1 '46 Cherokee
Blocksom, Berget H. '07 NC-7 '33 **U** Med Arts Bg Tulsa
Bloss, Claude M. Jr. '10 Ok-1 '37 Holdenville
Blue, Johnny A. '02 Ok-1 '34 **Al** 430 NW 12 OC
Boatright, Lloyd C. '01 Ok-1 '31 Cravens Bg OC
Bodine, Charles '19 Ok-1 '43 **OG** 1220 N Walker OC
Bogan, R. J. '99 DC-2 '29 **S** Union Bk Bg Bartlesville
[1]Boggs, James Thomas '22 Ok-1 '46 **R** 1200 N Walker OC
Boggs, Nathan '79 Ill-1 '06 Goodwell
Bohan, Kenneth '18 Tenn-6 '44 **Pd** 625½ NW 10 OC
Bohlman, W. F. '12 Ok-1 '37 Watonga
Bolend, Rex G. '87 Mo-34 '11 **U** V. A. Hosp Little Rock Ark
Bollinger, I. W. '89 Ark-1 '12 **Ind** Henryetta
Bond, Eugene C. '23 Ok-1 '48 Mil Serv
Bond, William L. '25 Ok-1 '47 **OG** 1200 N Walker OC
Bondurant, C. P. '97 Ok-1 '24 **D** Med Arts Bg OC
Bonham, William L. '00 Mich-1 '26 **ALR** 1111 N Lee OC
[5]Bonnell, W. L. '83 O-26 '07 116½ N 4 Chickasha
[5]Boon, U. C. '74 La-1 '98 **OALR** Petroleum Bg Chickasha

Boone, Wilmot B. '13 Ind-20 '40 4117 S 26 W Tulsa
Booth, G. R., Jr. '16 Ok-1 '44 Mil Serv
Booth, G. R., Sr. '84 Tenn-8 '04 Wilburton
Borecky, George L. '97 Ok-1 '23 521 NW 11 OC
[5]Boswell, H. D. '83 Ill-6 '12 Henryetta
Boyd, Hugh '17 La-1 '44 Braniff Bg Tulsa
Boyer, William F. '20 Cal-2 '43 **U** 604 S Cinn Tulsa
Boyle, James Stanton '25 Ok-1 '48 **U** 525 NW 11 OC
Bozalis, George S. '10 Ok-1 '35**Al** 711 NW 10 OC
Bradfield, S. J. '88 Ok-1 '15 **S** Med Arts Bg Tulsa
Bradford, Vance '10 Ok-1 '38 **S** 430 NW 12 OC
Bradley, Frank L. '03 Ok-1 '36 **Pu** Talihina
Bradley, H. C. '92 Ok-1 '17 Cravens Bg OC
Bradshaw, John O. '82 Mo-22 '06 **S** Welch
[1]Braly, Berton E. '26 Ok-1 '51 Woodward
Braly, M. K. '23 Ok-1 '47 Woodward
Branham, D. W. '00 Ok-1 '25 **U** 1200 N Walker OC
Brasfield, John A. '13 Tenn-6 '35 Okemah
Braun, J. P. '05 Ok-1 '30 Hobart
Brawner, Donald L. '24 Ok-1 '47 **S** Med Arts Bg Tulsa
[5]Breco, Joseph G. '77 Tex-6 '05 907 Minn Corpus Christi, Tex
Brewer, A. M. '01 Ok-1 '27 **S** 621 NW 10 OC
Bricker, Earl M., Jr. '22 Ok-1 '53 1200 N Walker OC
Brighton, Charles E. '17 Ill-2 '42 **Or** 604 S Cinn Tulsa
Brightwell, Richard J., Lt. Col. '12 Ok-1 '41 Scott Air Force Base Ill
Broach, R. Fred '20 Ark-1 '44 1305 N 10 Duncan
Brocksmith, Henry A. '10 Ind-20 '36 **I** 3102 S Harvard Tulsa
Brogden, J. C. '88 Md-1 '14 **S** Med Arts Bg Tulsa
[3]Brookshire, J. E. '73 Mo-20 '09 Ritz Bg Tulsa
Brown, A. M., Jr. '21 Ok-1 '45 Perry
Brown, Bruce H. '23 Ok-1 '47 **R** 3rd & Seminole McAlester
Brown, C. Alton '20 Ok-1 '43 Home State Life Bg OC
Brown, D. Nello '21 Ok-1 '45 **I** 510 NW 12 OC
Brown, Forest R. '13 Ok-1 '36 **PH** Wewoka
Brown, George M., Jr. '20 Ok-1 '43 3rd & Seminole McAlester
Brown, Gerster W. '03 Ok-1 '30 **Ind** Med Arts Bg OC
Brown, Irwin H. '20 Ok-1 '45 **S** 801 NE 13 OC
Brown, John M. '22 Tenn-6 '45 430 NW 12 OC
Brown, Manuel '14 Md-1 '38 **Al** 1619 E 15 Tulsa
Brown, Walter E. '09 Mo-2 '35 **R** 2020 S Xanthus Tulsa
Browne, Henry S. '90 La-1 '14 **U** Med Arts Bg Tulsa
Brumfield, Thomas J. '23 Ark-1 '51 6626 E. King Tulsa
Brundage, Bert T. '13 Ok-1 '36 Thomas
Bryan, W. J., Jr. '96 Tex-4 '21 **I** Med Arts Bg Tulsa
Bryant, R. W. '25 Ark-1 '52 Ochsner Hosp New Orleans, La
Buchner, H. W. '11 Mich-7 '36 **Pd** 1212 N Hudson OC
Buell, Arthur L. '07 Ok-1 '39 **S** Okmulgee
Buffington, F. C. '11 Ok-1 '35 502 S. Crawford Norman
Buffington, G. W. '20 Ok-1 '50 Tahlequah
Buford, E. L. '14 Ok-1 '41 Guymon
Bunch, A. H. '12 Ok-1 '50 Seminole
Bungardt, A. H. '74 Mo-20 '22 **S** Cordell
Bungardt, Alfred H. '13 Ok-1 '39 **Or** Med Arts Bg Tulsa
Burgtorf, Richard H. '17 Ok-1 '45 **Or** Shattuck
Burke, Richard M. '03 Minn-4 '30 Mil Serv
Burleson, Ned '03 Ok-1 '31 Prague
Burner, Jacob O. '01 Ill-6 '27 Okla A & M College Stillwater
Burnett, Thomas D. '23 Ark-1 '47 Sapulpa
Burns, Dixon N. '22 Tenn-5 '45 **OG** Utica Sq Med Ctr Tulsa
[5]Burns, S. L. '76 Tenn-5 '99 Stonewall
Burton, John Flack '97 NY-1 '23 **Pl** 434 NW 13 OC
Bush, J. M. '13 Ok-1 '39 **OALR** Community Bg Ponca City
Bushart, James H. '17 Tenn-6 '43 **S** 1208 Arlington Lawton
Bussey, H. N. '85 Ga-1 '08 Altus
Buster, Frank '27 Tex-12 '49 Cheyenne
Butler, H. W. '80 La-1 '22 **I** 1200 N Walker OC
Butler, V. V. '83 Ark-1 '14 Picher
Buvinger, Wilson J., Jr. '20 O-41 '44 **ALR** Bdwy Tower Enid
Buxton, Merwin Thomas, Jr. '23 Ok-1 '47 **I** 525 NW 11 OC
Bynum, Turner '10 Ill-6 '34 **I** 510 NW 12 OC
Bynum, William R. '27 Ok-1 '51 Pryor
Byrd, James N., Jr. '18 Neb-6 '45 Pauls Valley
Byrd, Wallace '05 Ill-1a '35 **I** Coalgate

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[5]Cailey, Leo F. '96 Ok-1 '25 **OALR** Rt 1 Box 165 OC
Caldwell, Avalo V. '21 Ok-1 '50 Security Bk Bg Lawton
Caldwell, Charles L. '02 Mo-2 '28 115 E 18 Tulsa
Cale, Walter '24 Ark-1 '46 Sapulpa
Calhoon, Ed L. '22 Ok-1 '51 Beaver
[5]Calhoun, C. E. '78 Md-9 '03 Sand Springs
Calhoun, W. H. '97 Va-1 '25 5323 S Lewis Tulsa
[1]Callahan, John S. '97 Ok-1 '24 Wilburton
Cameron, Alan S. '18 Ok-1 '50 1620 W. Okmulgee Muskogee
Cameron, Paul B. '07 Kan-2 '30 **I** Pryor
[3]Camp, Earl '92 Neb-5 '20 Buffalo
Camp, John N. '85 Pa-13 '15 Box 97 McAlester
Campbell, Coyne H. '04 Ill-1 '28 **P** Box 6246 OC
Campbell, David A. '24 Ala-2 '51 2207 Oxford Way OC
Campbell, J. Moore, III '11 Pa-1 '36 **Pu** Med Arts Bg OC
Canada, Joseph C. '03 Ok-1 '29 Mil Serv
Cannon, J. M. '93 Va-4 '17 210½ W Commerce OC
Cantrell, D. E., Jr. '05 Ok-1 '34 Headlton
Capehart, John D. '21 Ok-1 '46 814 N Osage Dr Tulsa
Capehart, Maurice P. '18 Ok-1 '44 **NS** 1635 E 15 Tulsa
Capehart, Samuel A. '13 Ok-1 '48 543 E Apache Tulsa
Capps, J. F. '88 Ill-22 '14 **Ind** Box 5573 OC
Carey, John M. '20 Mass-1 '45 **Pu** 301 NW 12 OC
Carney, A. B. '98 NY-5 '22 **S** 915 S. Cinn Tulsa
Carlock, J. Hoyle '10 La-1 '35 Gilbert Bg Ardmore
Carpenter, Richard E. '17 Ill-1a '43 **I** 1214 N Hudson OC
Carson, David '24 La-1 '48 Fairland
Carson, John M. '10 Ok-1 '36 **S** 14 E 9 Shawnee
Carson, William S. '96 Tenn-6 '24 Keota
Casebeer, Robert L. '15 Neb-5 '40 **OALR** 1212 N Hudson OC
Cash, Murray M. '16 Ont-1 '40 **CP** Med Arts Bg Tulsa
Cashman, Charles A. '21 Tenn-6 '45 **S** Shidler
Casper, P. D. '12 Ok-1 '46 4405 SE 28 OC
[3]Cates, Albert '79 Tenn-8 '06 2733 NW 20 OC
Catto, W. B. '86 Ky-2 '08 El Reno

Caviness, J. J. '89 Tenn-5 '12 **OALR** Med Arts Bg OC
Cawley, F. P. '16 Ok-1 '44 Hooker
[5]Chamberlain Elizabeth '83 Neb-6 '05 **P** 1316 Cherokee Bartlesville
Chambers, Claude S. '90 Tenn-6 '13 Seminole
Chambers, E. Evans '12 Ok-1 '40 **S** 617 S Quincy Enid
Champlin, Paul B. '96 Mo-2 '20 431 E Cherokee Enid
Chandler, Jesse S. '13 Tenn-7 '39 111½ S 2 Muskogee
Charney, Louis H. '02 Ok-1 '25 **I** 528 NW 12 OC
Chatham, Beverly C. '19 Tenn-5 '43 **OG** 620 Choctaw Chickasha
Cheatwood, W. R. '08 Ok-1 '37 925 Willow Duncan
Chestnut, W. G. '04 Ark-1 '27 **S** Miami
Childers, Emil M. '20 Kan-2 '45 **S** Utica Sq Med Ctr Tulsa
[5]Childs, J. W. '80 1616 S Madison Tulsa
Choice, R. W. '09 Ok-1 '38 Wakita
Chumley, C. P. '90 Ok-1 '16 Box 227 Chickasha
Clark, Ralph O. '08 Ok-1 '37 301 SW 23 OC
Clarkson, A. M. '03 Ok-1 '26 Idabel
Clay, Richard A. '18 Ok-1 '43 **Op** 415 NW 11 OC
Clemens, David C. 19 Ok-1 '52 Hartshorne
Click, William C. '25 Ok-1 '49 620 Choctaw Chickasha
Clift, Merl '96 Ok-1 '23 Blackwell
[3]Clinton, Fred S. '74 Mo-20 '97 230 E Woodward Blv Tulsa
[4]Clopton, James W. '21 Ok-1 '45 213 N Pamona Fullerton Cal
Clymer, C. E. '87 Mo-34 '10 **S** Med Arts Bg OC
Clymer, John H. '18 Ok-1 '44 **S** Med Arts Bg OC
Coates, R. R. '10 Ok-1 '37 **OALR** Okla Natl Bk Bg Chickasha
Cobb, N. E. '02 Mass-5 '27 **S** Mooreland
Cochran, Bryce H. '23 Ok-1 '51 Post Office Bg Midwest City
Cochran, C. M. '91 Ill-11 '24 **S** Okemah
Cochran, Roy L. '90 Ok-1 '19 Caddo
Cochrane, Charles R. '21 Ok-1 '47 Mil Serv
[5]Cochrane, J. E. '82 Tenn-8 '13 Byars
Coggins, F. W. '26 Ok-1 '47 **OG** 5117 N Barnes OC
Cohen, Eugene S. '22 Ok-1 '46 **OG** Med Arts Bg Tulsa
Cohenour, Howard M. '15 Tenn-6 '41 **U** Med Art Bg Tulsa
Coil, Jenner G. '06 Ok-1 '46 **OALR** Med Arts Bg OC
Coin, James W., Jr. '22 Ok-1 '51 Tahlequah
Coker, B. B. '98 Tenn-5 '24 **OALR** Durant
Cole, W. C. '15 Ok-1 '41 605 Gore Blv Lawton
Coleman, William O. '23 Ok-1 '47 **S** 1220 N Walker OC
[3]Coley, A. J. '58 Pa-2 '80 416 NW 13 OC
Coley, J. H. '07 Pa-2 '34 **OG** 416 NW 13 OC
[5]Collins, D. B. '80 Tenn-5 '00 **I** Waurika
Collins, Glen S. '24 Ok-1 '48 119 E Atchinson Plaza Midwest City
Collins, Joe Ed '24 Ok-1 '48 **U** 1325 SW 29 OC
Collins, Mabelle S. '23 Ok-1 '46 1325 SW 29 OC
[1]Collins, Wm. Robert '27 Ok-1 '53 Okmulgee
Colmore, John P. '21 NY-1 '46 **I** 800 NE 13 OC
Colvert, J. R. '15 Ok-1 '41 **Ge** 1319 Classen Dr OC
Colwick, James T., Jr. '26 Ok-1 '52 Durant
Colwick, J. T. '88 Tex-6 '12 Durant
Combs, Leon D. '21 Ok-1 '44 Med Arts Ctr Shawnee
[3]Comp, George A. '75 Mo-7 '03 Manitou
Connell, M. A. '06 Ok-1 '32 **Ind** Picher
Conrad, Betty Louise '20 Ok-1 '44 602 S Cheyenne Tulsa
Cook, C. E., Jr. '17 Ok-1 '42 Mil Serv
Cook, E. T., Jr. '15 Ok-1 '38 Anadarko
Cook, Odis A. '05 Ok-1 '31 Madill
[3]Cook, William A. '75 Ill-1 '97 Mayo Hotel Tulsa
[5]Cook, W. H. '78 Mo-2 '07 1002 S 8 Chickasha
Cooke, Everette E. '19 Ok-1 '43 **S** 1212 N Hudson OC
Coppedge, O. C. '79 Mo-28 '05 Bristow
Coppedge, Orville N. '02 Ok-1 '33 301 SW 23 OC
Coppedge, Oscar S. '82 Mo-28 '05 Depew
Corder, V. Woodard '11 Pa-9 '44 **An** 620 NW 9 OC
Cordonnier, Byron, Jr. '06 Ok-1 '32 **S** Bdwy Tower Enid
Cosby, Glen W. '17 Ok-1 '43 Miami
Coston, Tullos O. '05 Md-7 '30 **Op** 1111 N Lee OC
Cotten, Daisy '10 Ok-1 '37 **G** 525 NW 11 OC
Cotteral, John R. '99 Ok-1' 29 **Pd** Henryetta
Cotton, William W. '07 Ok-1 '35 Poteau
[5]Coulter, T. B. '79 O-1 '07 **U** 1346 S Norfolk Tulsa
Covington, Terrell, Jr. '18 Mo-2 '43 **I** 3102 S Harvard Tulsa
Cowling, Robert E. '01 Ok-1 '35 Ada
Cox, A. K. '06 Ok-1 '32 Watonga
[1]Cox, James A. '20 Tenn-7 '44 1301 NE 6 OC
Cox, J. L. '80 Tenn-6 '05 101½ W Main Ardmore
Cox, Marcus L. '21 Ga-1 '52 925 Britton Rd OC
Coyle, John J. '14 Ok-1 '43 **OG** 1200 N Walker OC
Coyner, Wallace R. '05 Ok-1 '47 Edmond
Craig, Paul E. '04 Ill-6 '30 2732 E 15 Tulsa
Cramblett, D. H. '19 Mo-34 '45 Holdenville
Crandall, Will G. '92 Minn-4 '20 **HAd** Sulphur
Crane, Donald V. '14 NY-6 '37 **Op** Med Arts Bg Tulsa
Crawford, Sterling '14 Ok-1 '42 **OG** 1200 N Walker OC
Crawford, William S. '91 SC-1 '14 **Ind** Natl Bk of Tulsa Bg Tulsa
Crick, L. E. '91 Ok-1 '34 **S** 2207 Oxford Way OC Tulsa
Cronk, Gerald Edwin '19 NC-7 '44 2020 S Xanthus
Cronk, Robert T. '19 NC-7 '44 **I** 2020 S Xanthus Tulsa
[5]Crow, Emory S. '77 Ga-1 '02 Olustee
Cunningham, C. B. '05 Ok-1 '35 Clinton
Cunningham, C. D. '14 Ok-1 '38 Gilbert Bg Ardmore
Cunningham, Charles S. '20 Ok-1 '45 Poteau
Cunningham, John A. '06 Ok-1 '36 First Natl Bg OC
Curnow, Dorothea E. '95 NY-1 '21 Okla A & M College Stillwater
Currie, R. L. '04 Tex-1 '30 Sallisaw
Curry, Dale Wayne '19 Tenn-5 '52 1101 E Bdwy Enid
Curry, J. F. '08 Tenn-6 '35 Sapulpa
Curtin, Virginia '13 Ok-1 '36 Watonga
Cushing, Vernon D. '14 Kan-2 '39 **Al** 711 NW 10 OC

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Dague, John C. '10 Tenn-6 '39 **Or** Utica Sq Med Ctr Tulsa
Daily, R. E. '03 Ok-1 32 Bixby
Dakil, L. N. '11 Ok-1 '36 118½ E Choctaw McAlester
Dakil, Samuel E. '21 Ok-1 '50 118½ E Choctaw McAlester
Dandridge, William S. '14 Ark-1 '39 **Or** Barnes Bg Muskogee
Daniels, Harry A. '96 Minn-4 '21 **I** 610 NW 9 OC
Danstrom, John R. '12 Ill-6 '38 **R** Med Arts Bg OC
Darrough, J. B. '09 Ok-1 '33 Vinita
Darrow, Frank E. '23 Ia-3 '47 **S** 216 SW 24 OC
Davidson, W. N. '92 Ok-1 '19 **OALR** Cushing

Davis, A. H. '93 Ky-2 '19 **OALR** Med Arts Bg Tulsa
Davis, Francis A. '18 Kan-2 '50 Med Arts Ctr Shawnee
Davis, George '17 Ok-1 '51 Seminole
[5]Davis, George M. '79 Ky-2 '09 Bixby
Davis, Kieffer '13 Ky-2 '38 **Ind** Adams Bg Bartlesville
Davis, Randell E. '25 Ok-1 '51 926 Willow Duncan
Davis, Thomas H. '99 O-41 '24 **Ind** 2020 S Xanthus Tulsa
Davis, Wesley W. '15 Ok-1 '41 Okla Natl Bk Bg Chickasha
Davis, William O. '16 Ok-1 '43 Cushing
Dawson, Clarence B. '19 Ok-1 '43 **U** 528 NW 12 OC
[5]Day, John L. '77 Tenn-6 '10 **PN** Woodward
Dean, Robert E. '22 Ok-1 '47 Mil Serv
[5]Dean, S. C. '71 Mo-28 '00 Howe
Dean, W. A. '88 Ga-5 '17 **OG** Med Arts Bg Tulsa
Dean, W. F. '98 Ok-1 '26 Ada
Deaton, Andy N. '00 Ark-1 '26 VA Hosp., Fayetteville, Ark.
Deese, E. F. '15 Ga-5 '45 Ada
DeJarnette, John F., Jr. '23 Ok-1 '48 Mil Serv
Delay, W. D. '99 Tenn-5 '23 Sulphur
Delhotal, Charles E., Jr. '19 Ok-1 '47 **Pd** 1200 N Walker OC
Demos, Ross P. '22 Ok-1 '46 Mil Serv
Dennis, Robert P. '20 Ok-1 '45 **Op** 1002 Gore Blv Lawton
Denny, E. Rankin '01 Ind-20 '25 **I** Nowata
Denyer, Hillard E. '17 Ok-1 '41 416 E 2 Bartlesville
Deputy, Ross '07 Ok-1 '35 Clinton
Dersch, Walter H., Jr. '21 Ok-1 '45 **I** Shattuck
Dersch, Walter H. '90 Ok-1 '17 Med Arts Bg OC
DeTar, George A. '74 Mo-28 '07 Miami
Deupree, Harry L. '08 Ok-1 '36 **OG** 1111 N Lee OC
Devanney, Phil J. '06 Ok-1 '31 Sayre
Devine, J. C. '27 Ok-1 '53 6336 E Admiral Pl Tulsa
DeVore, John W. '21 Ok-1 '45 **I** 1214 N Hudson OC
Dewar, James P. '13 Que-1 '39 **Pa** 800 NE 13 OC
Dewberry, Glenn P. '16 Ga-1 '41 **Pu** Clinton
Dickinson, W. Paul '22 Ok-1 '48 Luxora Ark
[1]Dietrich, Bailey L. '24 Ok-1 '53 Boise City
Dill, Francis E. '03 Neb-6 '28 Med Arts Bg OC
Dillman, Robert E. '22 Ok-1 '46 **OG** Med Arts Bg Tulsa
Dillman, Theodore Erman '22 Ok-1 '46 **S** Med Arts Bg Tulsa
Divine, D. G. '85 Mo-2 '13 Wagoner
[5]Dixon, Ambrose '72 Tex-7 '06 Hennessey
Dixon, R. W. '20 Ok-1 '44 1443 Westwood OC
Dixon, W. L. '88 Tenn-2 '13 Cement
Docter, Charles W. '20 Ill-6 '45 **Or** 1916 S Utica Tulsa
Dodd, Nevin W. '12 Tenn-6 '39 1307 E 35 Pl Tulsa
Dodson, Harrell C. '17 Ok-1 '41 **S** 411 NW 11 OC
Dolan, Gladys K. '16 Ill-1 '31 **PH** 2532 S Harvard Ct Tulsa
Donaghe, Roy W. '08 Ok-1 '47 **Pd** 119 S Santa Fe Norman
Donahue, Hayden H. '12 Kan-2 '41 531 State Capitol Bg OC
Donnell, John J. '11 Ok-1 '43 **I** 1214 N Hudson OC
Donovan, Mark H. '12 Mo-34 '38 **Pd** Utica Sq Med Ctr Tulsa
Dorrough, Joe '88 Ga-9 '10 El Reno
Dorwart, Frederic G. '93 Va-1 '24 510 S 11 Muskogee
Doudna, Hubert E. '04 Mich-1 '30 **An** 620 NW 9 OC
Dougan, A. F. '11 Ok-1 '36 **Op** Bdwy Tower Enid
[5]Dougan, A. L. '69 Kan-4 '97 Carmen
Dowling, William J. '22 Ok-1 '46 **S** 215 NW 17 OC
[5]Downey, D. S. '78 Ky-2 '08 1227 Kansas Chickasha
Downing G. G. '08 Tex-4 '33 605 Gore Blv Lawton
Doyle, Wm. H. '09 Mo-2 '34 **D** Barnes Bg Muskogee
Duer, Joe L. '05 Ok-1 '32 Woodward
Duffy, Francis M. '96 Neb-6 '23 **S** 211 W Maple Enid
Dugan, Robert R. '20 Pa-9 '45 **Ind** 718 Monument Rd Ponca City
Dunlap, Ernest B. '81 Ala-2 '06 **S** 513 C Ave Lawton
Dunn, J. Hartwell '15 Tenn-6 '41 **U** 1212 N Hudson OC

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Eads, C. H. '03 Ok-1 '33 **OG** Med Arts Bg Tulsa
Earnest, A. N. '90 Tenn-8 '13 **S** Barnes Bg Muskogee
Earp, Ancel, Jr. '23 Ok-1 '47 **S** Med Arts Bg OC
Eastland, William E. '98 Ok-1 '23 **R** Med Arts Bg OC
Echols, Raymond S. '17 Ok-1 '43 **An** Mil Serv
Eddington, Allen B. '23 Ok-1 '53 **P** Vinita
Edmundson, Walter F. '17 Pa-9 '41 **D** Med Arts Bg OC
Edwards, D. L. '07 Ill-6 '32 **Op** Utica Sq Med Ctr Tulsa
Edwards, Martin Dale '22 Ok-1 '45 **Ind** 846 Bush San Francisco Cal
Edwards, Rheba Huff '03 Ok-1 '38 **Al** 710 NE 13 OC
Eley, N. P. '97 Ok-1 '22 **Ge** 1319 Classen Dr OC
Eliel, Leonard P. '14 Mass-1 '40 **I** 825 NE 13 OC
Elkins, Marvin '14 Ok-1 '38 **OG** 428 Eastside Blv Muskogee
Elliott, Arthur F. '22 Ok-1 '45 **I** 807 NW 23 OC
Elliott, James H. '27 Ok-1 '52 Nowata
[5]Ellis, Henry A. '76 Tex-8 '05 Kiowa
Ellis, Leonard J., Jr. '17 Ok-1 '42 4101 N MacArthur Blv OC
Ellis, Richard A. '19 Ok-1 '45 810½ Main Duncan
Emenhiser, Lee K. '06 Ok-1 '31 **ALR** 511 NW 11 OC
Emmott, R. C. '21 Ont-6 '45 Stilwell
[4]Endres, Robert K. '23 Ok-1 '48 St. Louis Children Hosp St Louis Mo
England, Myron '06 Ok-1 '36 **OALR** Woodward
Engles, Charles F. '17 Ok-1 '51 2416 S Harvey OC
Engles, Loretta G. '26 Ok-1 '54 2416 S Harvey OC
Engles, Leroy L. '24 Ok-1 '48 Mil Serv
Enos, Jack P. '19 Ok-1 '50 Yukon
Ensor, Daniel B. '86 Tenn-10 '14 Alva
Epley, C. O. '82 Ill-11 '10 **Pr** 1200 N Walker OC
Erwin, Paul D. '23 Ok-1 '46 430 NW 12 OC
Eskridge, J. B., Jr. '96 Ok-1 '21 **OG** 1220 N Walker OC
Eskridge, James B., III '21 Ok-1 '45 **OG** 1220 N Walker OC
[1]Eslick, Ralph L. '16 Ill-6 '41 **R** 410 E Frank Phillips Bartlesville
Etherton, Monte C. '87 Mo-34 '13 2423 E Admiral Blv Tulsa
Etter, F. S. '93 Mo-34 '20 Union Natl Bk Bg Bartlesville
Evans, A. M. '02 Ok-1 '30 Perry
Evans, Hugh J. '99 Ill-6 '24 **OALR** Med Arts Bg Tulsa
Evans, Leo R. '99 Ok-1 '27 **PH** Sayre
[2]Everett, Mark R., Ph.D. 800 NE 13 OC
Ewell, William C. '09 Ark-1 '37 **OG** 1211 S Harvard Tulsa
[3]Ewing, Finis W. '76 Md-6 '05 1005 Denver Muskogee

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Fagin, Herman '00 Ok-1 '23 **I** 528 NW 12 OC
Fair, E. E. '15 Ok-1 '41 Mil Serv
Fair, E. N. '81 Ky-11 '08 Heavener
Fair, Thomas H. '24 Ok-1 '47 **I** 604 S Cinn Tulsa
Farris, Brunel D. '01 Ok-1 '27 Med Arts Bg OC
Farr, Louise K. '09 Ok-1 '43 4030 Springlake Dr OC
Farris, Edward M. '18 Ok-1 '41 **S** 1111 N Lee OC
Farris, Emil P. '22 Ok-1 '50 **Op** 528 NW 12 OC
Featherston, Wm. M. '22 Tenn-6 '45 **Pd** Elk City
Fehlman, Bernard F., Jr. '26 Mo-34 '51 **An** Mil Serv
Felton, Jean Spencer '11 Cal-11 '35 **Ind** 800 NE 13 OC
Ferguson, E. Gordon '00 Ok-1 '29 **Op** Med Arts Bg OC
Ferguson, Lawrence W. '03 Ok-1 '28 509 E St Lawton
Fetzer, Jack D. '22 Tex-4 '48 Woodward
Fife, Phillips R. '19 Ok-1 '43 **S** Guthrie
Fina, A. C. '21 Ill-6 '47 Atoka
Finch, J. William '08 Ok-1 '31 Hobart
Finley, G. E. '09 Tenn-7 '35 128 NE 2 OC
First, F. R., Jr. '18 Tenn-6 '43 Checotah
First, Safety R. '20 Ok-1 '43 **C** Med Art Bg Tulsa
Fisher, Roy L. '96 Wis-6 '22 **S** Frederick
Fishman, C. J. '82 Ill-1 '08 **I** 132 NW 4 OC
Fite, E. Halsell '98 Va-1 '24 **U** 443 N 16 Muskogee
Fite, William P., Jr. '22 Ok-1 '47 443 N 16 Muskogee
Fite, W. P. '90 Va-1 '16 **S** 443 N 16 Muskogee
Flack, F. L. '88 Kan-2 '12 **S** 3102 S Harvard Tulsa
Flack, Frank E. 23 Kan-2 '46 Woodward
Flanigin, H. F. '20 Ok-1 '43 **NS** 1635 E 15 Tulsa
Fleetwood, D. H. '03 Ok-1 '41 Edmond
Fleming, Elizabeth P. '06 NY-20 '31 **PH** Hugo
Flock, Eugene R. '18 Ok-1 '51 **Ind** 800 NE 18 OC
Florence, John '19 Ok-1 '43 **Or** 1200 N Walker OC
Floyd, John H. '28 Ok-1 '53 Comanche
Foerster, Hervey A. '03 Ok-1 '27 **D** 1220 N Walker OC
Foertsch, J. H. '17 Pa-12 '42 **I** 620 Choctaw Chickasha
Ford, Harry C. '08 Ok-1 '33 **OALR** Miami
Ford, H. W. '84 Mo-28 '07 **I** 915 S Cinn Tulsa
Forester, V. R. '07 Ok-1 '44 **I** 1111 N Lee OC
Forrest, H. J. '20 DC-1 '43 **S** 1419 E 15 Tulsa
Forry, W. W. '05 Tenn-6 '35 Bixby
Foster, Claude F. '24 Ok-1 '48 318 SW 25 OC
Fox, Fred T. '04 Ok-1 '30 **S** 605 Gore Blv Lawton
Fox, William W. '99 Ok-1 '26 230½ E Main Norman
Frank, L. S. '13 Ill-6 '37 **Pd** 1111 N Lee OC
Franklin, Onis '82 Tenn-8 '04 Broken Arrow
Franklin, S. E. '08 Ill-6 '34 **S** 1619 E 15 Tulsa
Freed, Leon C. '13 O-41 '38 **I** Perkins
Freede, Charles L. '21 Ok-1 '45 **Pd** 430 NW 12 OC
Freede, H. J. '18 Ok-1 '42 **Or** 430 NW 13 OC
Freeman, Charles W. '17 Ok-1 '41 **Pd** 625½ NW 10 OC
Frew, A. L. '16 Tex-12 '45 **S (Oral)** 528 NW 12 OC
Fried, David '13 Ok-1 '40 Mangum
Frierson, S. E. '79 La-1 '07 2203 N Hudson OC
Fry, F. Polk '09 Ok-1 '36 Frederick
Fry, Powell E. '10 Ok-1 '34 416 Washington Stillwater
Fryer, Samuel R. '10 Ok-1 '33 **S** 511 NW 11 OC
Fulcher, Joseph '99 Tenn-6 '26 **U** 1151 S. Peoria Tulsa
Fullenwider, C. G. '16 Mo-2 '43 **Op** Barnes Bg Muskogee
Fulton, C. C. '02 Ill-1 '28 **S** Med Arts Bg OC
Funk, Robert E. '15 Ill-6 '40 **I** 3102 S Harvard Tulsa
Funnell, Joseph W. '21 Ok-1 '49 **OG** 525 NW 11 OC
Fuquia, W. A. '81 La-1 '10 Grandfield
Furman, Robert H. '18 Conn-1 '43 **C** 825 NE 13 OC

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Gable, James J., Jr. '18 Ok-1 '42 **I** 301 NW 12 OC
Gaddis, John W. '24 Ind-20 '47 1530 S. Peoria Tulsa
Gaddis, Newell C. '19 Ill-6 '45 **I** 1530 S Peoria Tulsa
Gafford, Tom S., Jr. '21 Ok-1 '47 **Pa** Barnes Bg Muskogee
Galbraith, Ben T. '21 Tenn'6 '44 **C** 3rd & Seminole McAlester
Galbraith, Hugh M. '99 Mich-1 '27 **P** First Natl Bg OC
[1]Galindo, Desiderio Leo '19 Tex-4 '47 **Pa** St John's Hosp Tulsa
Gallagher, C. A. '11 0k-1 '37 **S** 610 NW 9 OC
Gallagher, John '25 Pa-9 '51 Piqua Ohio
Gallaher, Clinton '03 Ill-6 '29 **OALR** American Natl Bg Shawnee
Gallaher, Paul '11 Ill-6 '36 **S** Federal Bk Bg Shawnee
Galloway, Nova L. '22 Ok-1 '51 **PH** Tahlequah
[1]Gamble, Shelby G. '11 Neb-5 '37 **PM** 800 NE 13 OC
Gardner, Charles Campbell '84 Mo-2 '09 **PH** 516 E Grand Ponca City
Garnier, Wm. H. '10 Ok-1 '35 **OALR** Natl Bk Bg Stillwater
Garrett, D. L. '88 Ga-11 '10 **S** Med Arts Bg Tulsa
Garrison, George H. '98 Mo-2 '24 **Pd** 1111 N Lee OC
Gastineau, F. T. '88 Ok-1 '18 **Op** Med Arts Bg Tulsa
Gathers, G. B., Jr. 16 Ok-1 '50 1524 W 8 Stillwater
Gauchat, A. C. '19 Neb-5 '45 14 E 9 Shawnee
Gee, O. J. '93 Tenn-5 '15 Med Arts Bg OC
Gee, Robert L. '78 Mo-7 '03 **OALR** Hugo
Geiger, William, Jr. '24 Neb-5 '51 Fairfax
Geigerman, David J. '21 Ok-1 '44 **An** 1220 N Walker OC
Gentry, E. Lee '18 Ok-1 '50 Pawnee
Gentry, R. C. '07 Ok-1 '32 Union Natl Bk Bg Bartlesville
George, Ella Mary '00 Tex-4 '33 **PM** 800 NE 13 OC
George, L. J. '82 Tenn-8 '07 Stuart
Gephardt, Maurice C. '16 Ok-1 '43 **I** 443 N 16 Muskogee
Ghormley, J. G. '01 Ok-1 '34 Blackwell
Ghormley, L. W. '26 Tenn-6 '47 **S** Blackwell
Gibson, R. B. '89 Ok-1 '15 215 N 3 Ponca City
Gibson, Robert W. '23 Tenn-6 '48 Mil Serv
Gilbert, John Berry '17 Ok-1 '43 1115 S 6 Ponca City
Gilbert, Leon N. '18 Tex-12 '50 Bethany
Gill, W. T. '06 Ill-6 '39 **S** Ada
Gillespie, C. P. '87 Miss-2 '10 **P** Central State Hosp Norman
[5]Gilliam, W. C. '69 Ark-1 '05 Spiro
Gissler, N. E. '03 Conn-1 '28 Okemah
Glasgow, Jack G. '18 Ok-1 '42 4101 N MacArthur OC
Glass, Fred A. '87 Md-7 '12 **S** 2020 S Xanthus Tulsa
Glasscock, T. C. '18 Ill-1 '42 Community Bg Ponca City
Glasser, Samuel M. '08 NY-8 '35 **R** 921 NE 13 OC
Glismann, M. B. '93 NY-15 '18 430 NW 12 OC
Glomset, John L. '01 Mo-2 '30 **OG** 2420 Classen Blv OC
Goddard, Roy K., Jr. '16 Pa-13 '43 P. O. Box 801 Tulsa

Godfrey, James T. '15 Ok-1 '40 Gilbert Bg Ardmore
Godfrey, Kenneth E. '18 Ok-1 '50 Okeene
Goen, R. W. '14 Col-2 '39 **I** Braniff Bg Tulsa
Goldberg, Jed E. '24 Ok-1 '48 **OG** Utica Sq Med Ctr Tulsa
Goldberger, J. H. '10 La-1 '35 **OALR** El Reno
Goldfain, E. '94 Col-2 '21 **I** 228 NW 13 OC
Goodman, George L. '98 Ok-1 '27 Yukon
Goodman, Samuel '89 Mo-20 '12 **I** Med Arts Bg Tulsa
Goodwin, R. Q. '95 Col-2 '28 **I** 1111 N Lee OC
Googe, Mary Carolyn '26 Col-2 '51 **An** 800 NE 13 OC
Gordon, J. M. '01 Ok-1 '27 Gilbert Bg Ardmore
Gordon, Minor E. '14 Ark-1 '42 Claremore
Gorrell, Ben F. '19 Ok-1 '45 **OALR** Med Arts Bg Tulsa
Gorrell, J. F. '81 Pa-1 '08 **OALR** Med Arts Bg Tulsa
Gottschalk, Paul R. '15 Mo-2 '40 **Ind** 1305 N 10 Duncan
Gowey, H. O. '77 Ia-10 '07 Newkirk
Graening, P. K. '00 Ia-3 '26 Med Arts Bg OC
Graham, A. T. '91 Tenn-8 '13 26 SW 25 OC
Graham, Hugh C. '96 Ill-1 '25 **Pd** Utica Sq Med Ctr Tulsa
Graham, J. A. '16 Ia-3 '40 Pauls Valley
Graham, Mary Virginia '16 La-1 '44 1306 E 36 Tulsa
Graham, Rex M. '18 Ok-1 '42 **OG** Miami
[3]Grantham, Elizabeth '69 Neb-6 '02 Alva
Gray, John F. '13 Ia-3 '43 **P** Utica Sq Med Ctr Tulsa
Gray, Virgil B., Jr. '20 Kan-2 '44 1119 W Bdwy Muskogee
Graybill, Charles S. '19 Ok-1 '43 **Or** 1202 Arlington Lawton
Graybill, Ray B. '20 Pa-13 '46 **I** 130 S Ct Ardmore
Green, B. F. '23 Ont-6 '47 Stilwell
Green, Charles E. '11 Ind-20 '42 **Pd** 1202 Arlington Lawton
Green, James L., Jr. '23 Ok-1 '47 **S** Barnes Bg Muskogee
Green, J. Douglas '25 Tex-4 '52 Cushing
Green, Otto I. '79 Ill-11 '12 **OALR** Union Natl Bk Bg Bartlesville
Greenberger, Edward M. '07 NY-19 '32 **R** Med Arts Bg McAlester
Greer, Allen E. '18 Ok-1 '42 **Pu** 430 NW 12 OC
Gregg, O. R. '85 Mo-35 '08 **PH** 101 E Eufaula Norman
Gregston, Jack L. '21 Ok-1 '45 Marlow
Grigsby, O. L. '21 Ok-1 '45 Nowata
Grimes, John P. '00 Ga-5 '24 **S** Wewoka
Gross, Worth M. '16 Ill-6 '42 **Or** Med Arts Bg Tulsa
[5]Grosshart, Paul '02 Tenn-6 '31 **S** 2203 E 24 Tulsa
Groves, Hassel E. '24 Ok-1 '48 318 W Commerce OC
Grubb, Robert D. '19 Ill-6 '44 **I** 1306 E 35 Tulsa
Guild, Carl H., Jr. '21 Ok-1 '44 **An** 1419 E 15 Tulsa
Guild, Carl H., Sr. '88 Ok-1 '18 Shidler
Gullatt, Ennis M. '06 Ok-1 '32 **S** Ada
Guthrey, George H. '21 Ok-1 '44 **P** 510 NW 12 OC
Gwartney, Warren G. '20 Ok-1 '50 Pryor
Gwin, Jerry B. '14 La-1 '43 **S** Ada
Gyles, Wm. T. '24 Ok-1 '48 Rush Springs

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[5]Haas, H. R. '81 Mo-3 '04 **OALR** Disney
Hackler, H. W. '06 Ok-1 '33 **P** Central State Hosp Norman
Hackler, John F. '10 Ok-1 '33 **PH** 519 South 3rd Muskogee
Haddock, J. L. '06 Ok-1 '32 **OG** 231 E Gray Norman
Haddock, Phil '12 Tenn-6 '37 231 E Gray Norman
Haddox, A. W. '23 Mo-2 '51 Antlers
Haddox, C. H. '94 Mo-2 '21 Pawnee
Hagg, O. J. '18 Mo-34 '43 Waurika
[5]Hahn, L. A. '73 Ill-1 '02 **S** Guthrie
Hairston, Richard M. '20 Tenn-7 '50 917 S 1st Chickasha
Hake, Orin J. '23 Ok-1 '49 El Reno
Hale, A. Eugene '18 Ok-1 '50 Idabel
Hale, Arthur E. '21 Ok-1 '45 **I** 2020 S Xanthus Tulsa
Hale, Forrest '97 Ok-1 '25 Cherokee
Hall, Clark H. '94 Pa-2 '19 **Pd** Med Arts Bg OC
[3]Hall, G. H. '72 NY-19 '01 **U** 15 W Third Tulsa
Hall, R. L. '90 Mo-7 '21 Bass Bg Enid
Hallford, J. C. '26 Ok-1 '52 Boise City
Hamble, V. R. '84 Mo-22 '10 802 W York Enid
[5]Hamilton, S. H. '79 Mo-22 '09 Calvin
Hamm, Leslie T. '12 Neb-6 '38 1202 Arlington Lawton
Hamm, Silas G. '77 Tenn-8 '12 Haskell
Haney, T. Paul '99 Va-1 '26 **PH** 521 N Boulder Tulsa
Hannas, R. R., Jr. '18 Mass-1 '50 Sentinel
[2]Hansen, Fred, LL.B. Attorney General's Office OC
[5]Harbison, Edgar Frank '01 Tenn-5 '27 **S** 1705 Dorchester Dr OC
Hardman, Thomas J. '10 Ok-1 '34 **S** Utica Sq Med Ctr Tulsa
Hardy, Homer D., Jr. '25 Ok-1 '49 4116 S 25 W Ave Tulsa
Hargrove, Robert D. '18 Ok-1 '50 Pawnee
Harkins, Richard A. '14 Ark-1 '41 Med Arts Bg McAlester
[5]Harris, Bunn '88 Ark-1 '13 **Pd** Jenks
Harris, Clyde E. '19 Ok-1 '43 2419 N Walker OC
[5]Harris, D. S. '83 Tex-5 '06 Drummond
Harris, Forest D. '23 Mo-2 '51 **Pd** 301 W Bdwy Ardmore
Harris, Henry W. '00 Ok-1 '27 **OG** 1200 N Walker OC
Harris, Richard L. '18 Ok-1 '45 3832 N May OC
Harris, Russell D. '04 Mo-2 '32 **Or** 605 NW 10 OC
Harrison, Gene H. '22 Ok-1 '50 Seminole
Harrison, Lynn '12 Ok-1 '40 2850 NW 23 OC
Harrison, Stearley P. '13 Ill-6 '41 **I** Ada
Hart, George A. '19 Ill-11 '52 Cherokee
Hart, Marshall O. '00 Ok-1 '27 1228 S Boulder Tulsa
Hartford, W. K. '09 Ok-1 '40 **OG** 1111 N Lee OC
Hartig, Clemens M. '05 Kan-2 '43 **S** Utica Sq Med Ctr Tulsa
Harvey, Charles M. '23 Tex-2 '47 **I** 67 and May Ave OC
Harvey, John '88 Ark-1 '11 Heavener
Harvey, Rosemary '24 Kan-2 '49 Miami
[5]Haskett, Paul E. '87 Pa-2 '13 1941 NW 19 OC
Haslam, G. E. '00 Ga-5 '24 **OALR** Anadarko
Hassler, F. R. '01 Ok-1 '37 **PH** State Capitol Bg OC
Hassler, Grace C. '00 Ok-1 '35 **An** 1111 N Lee OC
[5]Hathaway, Alfred H. '71 Ark-1 '05 Mountain View
Hathaway, W. G. '75 Ark-1 '10 Lone Grove
Haugen, I. J. '97 Ill-1 '32 Ada
[5]Hawn, W. T. '85 Mo-28 '10 Binger
Hayes, Basil A. '90 Tex-2 '19 **U** 625 NW 10 OC
Hayes, John R. '22 Ga-5 '46 **I** 624 N Bdwy Shawnee
[5]Hayes, Rutherford B. '77 Ind-18 '06 Guymon
Hayne, Robert A. '15 Ia-2 '40 Mil Serv
Haynes, W. M. '05 Ark-1 '38 Henryetta
Haynie, W. K. '07 Ok-1 '33 **S** Durant

[4]Hays, Carolyn '24 Ok-1 '47 Penn Hosp Philadelphia Pa
Hays, Luvern '02 Mich-1 '26 **Pd** 2445 E 27 Pl Tulsa
Hays, Marvin B. '21 Ok-1 '45 **Or** 411 NW 11 OC
Hays, P. L. '90 Ok-1 '14 **P** Vinita
Hazel, Onis G. '00 Ok-1 '31 **D** Med Arts Bg OC
[3]Heatley, John '87 Mo-20 '11 **R** 701 NE 42 OC
Heerwagen, Paul K., Jr. '21 Ark-1 '52 Collinsville
Heflin, W. A. '24 O-6 '48 Ryan
Heine, Ralph R. '22 Ill-6 '47 Elk City
Hellams, Alfred A. '12 Ok-1 '38 **P** 1200 N Walker OC
[2]Hellbaum, Arthur A. '04 Ill-1a '43 800 NE 13 OC
[5]Henderson, F. W. '79 Ark-1 '17 2541 E 11 Pl Tulsa
Henderson, William N. '22 NC-7 '46 Mil Serv
Hendren, Scott '17 Ok-1 '41 **I** 2909 S Harvey OC
Henke, J. R. '11 Ok-1 '37 Hydro
Henley, Marvin D. '97 Ok-1 '22 **OALR** Med Arts Bg Tulsa
Henley, Thomas H. '20 Ok-1 '50 Fairview
[5]Hennings, A. E. '78 Mo-7 '07 Tuttle
Henry, Eugene M. '15 Tenn-6 '36 **U** 204 N 3 Muskogee
Henry, Gifford H. '01 Ill-11 '27 **S** 3102 S Harvard Tulsa
Henry, M. L. '08 Ark-1 "32 Med Arts Bg McAlester
Henton, Rossler, '26 Ok-1 '51 Rush Springs
Herndon, Robert E. '25 Ok-1 '48 **Pd** 620 Choctaw Chickasha
Herlihy, Robert M. '15 Mo-34 '43 Bdwy Tower Enid
Herod, Philip F. '83 Mo-20 '08 **OALR** El Reno
Herrmann, Jess '07 Ok-1 '31 **NS** 525 NW 11 OC
Hetherington, L. P. '03 Neb-5 '30 Miami
Hewitt, Perry '11 Ok-1 '37 **NS** Manhattan Bg Muskogee
Hicks, C. A. '86 Tenn-8 '13 **OALR** Holdenville
Hicks, Fred B. '84 Tenn-8 '11 **OALR** Med Arts Bg OC
Hicks, J. T., Jr. '23 La-1 '46 **U** 605 Gore Blv Lawton
Hicks, Melvin C., Jr. '25 Ok-1 '49 Ada
Hidy, W. Dean '28 Ark-1 '53 1321 S Main Tulsa
Highland, John E. '14 Ok-1 '39 Miami
[5]Hill, C. B. '70 Mo-20 '99 Guthrie
Hill, O. L. '06 Tenn-6 '31 **I** 915 S Cinn Tulsa
[4]Hindman, William M. '17 Tenn-6 '45 **Pa** Detroit Mich
[5]Hines, S. J. T. '70 Tex-8 '05 Tahlequah
Hinkle, Alfred B. '26 Ok-1 '51 Alva
Hinshaw, J. R. '96 Ok-1 '21 **S** 220 S Flood Norman
Hinson, Bruce R. '06 Ill-6 '32 **S** 330 E 5th Enid
Hirshfield, A. C. '87 Ind-20 '08 **OG** Med Arts Bg OC
Hirst, Claude M. '21 Ark-1 '50 624 N Bdwy Shawnee
Hodge, James C. '26 Ok-1 '48 **S** 1243 W Britton Rd OC
Hodgson, C. M. '03 Ok-1 '27 Kingfisher
Hohl, James F. '19 Ok-1 '44 **I** Ada
[5]Hoke, Clarence C. '85 Md-2 '14 **S** 1615 Ames Winfield Kan
Hoke, Lillian '17 Ok-1 '49 **Pd** 2847 Wilshire Blv OC
Holcomb, Mark D. '07 Ky-2 '36 Bdwy Tower Enid
Holcombe, R. N. '92 Mo-2 '16 Surety Bg Muskogee
Holden, E. Neal '25 Tex-4 '51 1035 NE 36 OC
Holland, C. K. '21 Tenn-5 '45 **I** 3rd & Seminole McAlester
[4]Hollingsworth, Francis W. '19 Ok-1 '44 **S** El Reno
Hollis, J. B. '91 Tenn-6 '16 **OALR** Mangum
Hollis, J. E. '85 Tenn-6 '16 **OALR** Bristow
Hollis, Lynn E. '07 Tex-2 '33 **Ind** Tinker Air Force Base OC
Holman, James '17 Ok-1 '51 Altus
Holt, Orville U. '21 Ok-1 '52 Claremore
Holt, Robert P. '18 Ok-1 '43 **Or** 301 NW 12 OC
Holt, Willard '08 Ill-6 '32 **I** Altus
Hood, F. Redding '00 Ok-1 '30 **C** 1220 N Walker OC
Hood, James O. '07 Ok-1 '31 **HAd** Student Health Serv Norman
[3]Hooper, Joel S. '74 NY-6 '01 V A Hosp Muskogee
Hoover, W. D. '08 Ok-1 '33 Stanolind Bg Tulsa
Hopkins, P. W. '80 Ky-5 '07 Bdwy Tower Enid
Hopps, Howard C. '14 Ok-1 '37 **Pa** 801 NE 13 OC
Horn, John E. '16 Ok-1 '41 **S** 1620 W Omulgee Muskogee
Horne, Malcolm $06 Ok-1 '46 Little Bg Ardmore
Horton, J. C. '24 Ok-1 '52 Frederick
Hotz, Carl J. H. '02 Ill-11 '28 **S** 604 S Cinn Tulsa
Hough, Jack Van Doren '20 Ok-1 '43 **ALR** 301 NW 12 OC
Howard, Herbert '16 Ok-1 '42 **I** 605 Gore Blv Lawton
[5]Howard, R. M. '78 Mich-1 '01 **S** 815 NW 15 OC
Howard, R. Palmer 12 Que-1 '37 **I** 825 NE 13 OC
Howard, Robert B. 13 Ok-1 '36 **S** 1200 N Walker OC
Howard, Thomas D. '22 Ok-1 '48 Idabel
Howard, Walter A. '83 Mo-7 '07 Chelsea
Howe, J. Holland '87 Ky-2 '16 **U** 310 N 7 Ponca City
[3]Howell, O. E. '77 Mo-29 '00 Norman
[4]Hoyt, Arthur W. '14 Mich-1 '40 **P** 1401 Buchanan Topeka
Hubbard, John R. '10 Pa-9 '38 1501 NE 11 OC
Hubbard, Ralph W. '08 Ok-1 '32 1501 NE 11 OC
Hubbard, Wm. E. '18 Ok-1 '41 1501 NE 11 OC
Huber, W. A. '94 Ok-1 '19 **Op** Med Arts Bg Tulsa
Huckabay, B. M. '86 Tex-4 '09 Antlers
Hudson, David V. '96 Md-7 '23 **PH** 521 N Boulder Tulsa
Hudson, F. A. '84 Ill-6 '08 **S** 617 S Quincy Enid
Hudson, Frederick G. '23 Ok-1 '50 **I** 617 S Quincy Enid
Hudson, Harry H. '90 Ill-6 '13 **U** 617 S Quincy Enid
Hudson, L. D. '82 Tenn-1 '09 Dewey
Hudson, Margaret G. '97 Md-7 '24 **PH** 1759 S Victor Tulsa
Huff, Dick H. '19 Ok-1 **Al** 711 NW 10 OC
Huggins, J. R. '04 Ok-1 '33 Med Arts Bg OC
Hughes, Horton E. '07 Ill-6 '30 **S** 14 E 9 Shawnee
Humphrey, B. H. '95 Mo-43 '20 Sperry
Humphreys, D. W. '89 O-2 '13 Cushing
Hunt, Davis T. '01 Pa-13 '26 **Ob** Mooreland
Huntington, C. S. '12 DC-1 '39 **Ind** Adams Bg Bartlesville
Husband, William G. '23 Ok-1 '47 Elk City
Hyatt, E. G. '92 Ill-11 '20 **I** 604 S Cinn Tulsa
Hyde, W. A. '01 Tex-2 '26 **S** Durant
Hyer, J. V. '01 Ok-1 '26 Garber
Hyroop, Gilbert L. '00 Ok-1 '27 **Pl** 1219 N Walker OC
Hyroop, Muriel E. Ont-1 '28 **P** Box 6246 OC

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Ihrig, H. Kenneth '19 Ok-1 '50 **An** 1701 E 19 Tulsa
Imler, Robert L. '20 Pa-2 '45 **NS** Utica Sq Med Ctr Tulsa
Ingle, John D. '16 Ok-1 '43 **S** 1200 N Walker OC
Irby, J. P. '03 Ok-1 '28 Altus
Ishmael, William K. '10 Ok-1 '35 **I** 605 NW 10 OC
Ivy, Wallis S. '85 Tenn-5 '10 **Pd** 701 N 12 Duncan

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Jackson, A. R. '97 Ok-1 '30 2519 S Robinson OC
Jacob, John B. '24 Ok-1 '48 Mil Serv
Jacobs, Minard F. '99 Mich-1 '23 **I** Med Arts Bg OC
Jacobs, Raymond G. '04 Ia-3 '28 310 S 5th Enid
Jacobs, William S. '16 Pa-1 '42 **I** 3102 S Harvard Tulsa
Jacoby, J. Sherwood '80 Ga-11' 10 Commerce
Jenkins, W. P. '80 Ark-1 '12 Okemah
Jennings, Monroe R. '21 NC-7 '49 Claremore
Jeter, Hugh '95 Ky-2 '25 **I** 1200 N Walker OC
Jobe, James P. '24 Ok-1 '51 El Reno
Jobe, Virgil R. '02 Ok-1 '33 1213 N Hudson OC
Johnson, Alpha Louis '02 Ok-1 '26 El Reno
Johnson, C. L. '19 Ok-1 '43 421 S Cherokee Bartlesville
Johnson, Edgar A. '80 Ga-11 '10 Hugo
Johnson, E. O. '08 Ok-1 '34 **OG** Med Arts Bg Tulsa
[5]Johnson, H. L. '85 Ok-1 '17 **P** Woodward
Johnson, Maxwell A. '14 Ill-1a '43 **U** Med Arts Bg Tulsa
Johnson, Philip Carl, Jr. '24 Mich-1 '49 **I** 921 NE 13 OC
Johnson, Port '07 NY-15 '32 **Or** Surety Bg Muskogee
Johnson, R. Chadwick '20 Conn-1 '45 **I** Sand Springs
Johnson, Robert H. '13 Mo-2 '40 **Or** 2020 S Xanthus Tulsa
Johnson, S. E. '90 Tenn-8 '13 **OALR** Commercial Natl Bg Muskogee
Johnson, William B. '25 Ga-1 '48 **Pd** 624 N Bdwy Shawnee
Johnston, L. A. S. '09 Ok-1 '36 Holdenville
Jones, Craig S. '18 Kan-2 '44 **I** 915 S Cinn Tulsa
Jones, Harold H., Jr. '18 Kan-2 '43 **I** 105 N First Ponca City
Jones, Hugh '94 Ill-6 '23 **OG** Med Arts Bg OC
[3]Jones, John Paul '66 Kan-3 '95 Dill City
Jones, Phyllis E. '16 Ok-1 '40 **D** Med Arts Bg OC
[5]Jones, Ralph E. '83 Mo-7 '05 Nicoma Park
Jones, S. Tisdal '17 Ok-1 '52 Cordell
Jones, W. E., Jr. '18 Ark-1 '43 **OG** Seminole
Jones, W. E., Sr. '87 Ky-2 '11 Seminole
Joseph, Philip G. '13 Ok-1 '40 Sapulpa
Joyce, Charles W. '81 Tenn-6 '03 Fletcher
Judd, Loyd '22 Ok-1 '50 Prague

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Kahn, Robert W. '16 Ok-1 '39 **I** Med Arts Bg OC
Kaiser, G. L. '03 Neb-6 '29 1221 W Bdwy Muskogee
Kalmon, Edmond H. '15 Tenn-5 '40 **R** 301 NW 12 OC
[5]Kayler, R. C. '75 Ill-1 '00 McLoud
Keen, Frank M. '05 Ok-1 '32 **S** 624 N Bdwy Shawnee
Kell, Thornton '11 Ga-1 '37 **S** 208 W Bdwy Ardmore
Keller, J. P. '21 Ok-1 '51 6 N 9 Duncan
Keller, W. Floyd '95 Ok-1 '31 **Pa** Med Arts Bg OC
Kelley, James W. '15 NC-7 '40 **Pl** Utica Sq Med Ctr Tulsa
Kelso, Joseph '99 Ia-3 '25 **G** 525 NW 11 OC
Keltz, Bert F. '04 Ia-3 '28 **I** 1111 N Lee OC
Kemmerly, H. P. '01 Ark-1 '28 **An** 1419 E 15 Tulsa
Kennedy, Julian J. '16 Ok-1 '42 Edmond
Kent, Charles T., Jr. '22 Ok-1 '51 Bristow
Kerekes, Ernest S. '16 NY-9 '43 **R** Utica Sq Med Ctr Tulsa
[3]Kerley, W. W. '71 Ark-1 '98 Anadarko
[4]Kernek, Clyde '09 Ok-1 '37 614 N 31 Corvallis Oregon
Kernek, Paul '14 Ok-1 '39 **Or** Holdenville
Kernodle, Stratton E. '94 Ok-1 '19 **S** First Natl Bg OC
Ketchum, Hall '20 Ill-6 '46 **OG** Utica Sq Med Ctr Tulsa
[1]Kethley, Jerold D. '17 Tex-12 '50 **S** 624 N Bdwy Shawnee
[5]Kilpatrick, E. S. '80 Tenn-8 '11 Elk City
Kilpatrick, G. A. '87 La-1 '14 **S** Henryetta
Kimball, Gale Robert '22 Ok-1 '51 925 NW Britton OC
Kimball, George H. '99 Ok-1 '26 **Pl** 1111 N Lee OC
Kimerer, Neil Banard '18 Ill-1a '44 **P** 525 SW 2 OC
King, Everett G. '10 Ok-1 '33 Mil Serv
King, E. W. '79 Ky-5 '05 Bristow
King, Robert W. '21 Ok-1 '50 **Op** 1111 N Lee OC
Kinsinger, R. R. '09 Ok-1 '36 **R** Blackwell
Kirby, L. R. '07 Col-2 '34 **S** Bdwy Tower Enid
Kishner, L. L. '19 Wis-6 '46 Mil Serv
Klass, O. C. '81 Ky-2 '04 **Ob** Surety Bg Muskogee
[1]Kleinschmidt, George W. '24 Neb-1 '48 **P** Central State Hosp Norman
Knight, Claude B. '11 Ok-1 '35 Wewoka
Kolb, I. N. '82 Mo-7 '23 Blanchard
Kornblee, A. T. '12 Ill-1 '37 **D** Med Arts Bg Tulsa
Kouri, Philip '23 Ok-1 '47 Mil Serv
Kramer, Allen C. '00 Ok-1 '25 **S** 1547 S Lewis Tulsa
Krause, Albert H. '06 Mo-2 '35 **S** V A Hosp Muskogee
Kreger, Glenn S. '09 Pa-1 '33 Tonkawa
Kreger, J. Russell '17 Ok-1 '42 Tonkawa
Kreitmeyer, George R. '22 Mo-2 '51 **Pd** 1916 S Utica Tulsa
Krieger, Carl, Jr. '25 Ark-1 '48 Mil Serv
Kuhn, John F. '07 Ok-1 '31 **OG** 1111 N Lee OC
Kupka, John F. '03 Tenn-6 '32 Haskell
Kuyrkendall, L. C. '85 Mo-34 '10 **OALR** 117 N First McAlester

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Lachman, Ernest '01 Germ-3 '24 **R** 801 NE 13 OC
LaCroix, Julius A., Jr. '19 Ok-1 '50 Hugo
LaFon, William F. '13 Ok-1 '37 Mil Serv
[3]Lain, E. S. '76 Tenn-5 '00 **D** 1706 Elmhurst OC
Lain, W. B. '94 Tenn-6 '17 **Pu** Clinton
Lamb, Ellis '78 Tex-2 '05 **I** Clinton
Lamb, John H. '05 Ok-1 '32 **D** Med Arts Bg OC
Lambert, J. B. '88 Mo-34 '12 Lexington
Lambke, Phil M. '03 Ok-1 '33 105 NW 23 OC
[3]LaMotte, George A. '77 Pa-2 '01 Colcord Bg OC
Lane, Kenneth S. '20 Ok-1 '50 Vinita
Lane, Marie T. '15 Ok-1 '49 9407 N Francis OC
Lane, W. H. '79 Ill-22 '13 9407 N Francis OC
Lang, S. A. '03 Ok-1 '32 Nowata
Langston, Wann '82 Ok-1 '16 **I** 1214 N Hudson OC
Larrabee, W. S. '85 Ky-2 '10 **R** Med Arts Bg Tulsa
Lattimore, Frank Cornwell '08 Ok-1 '32 Kingfisher
Lawrence, Forrest C. '17 Mo-2 '43 Med Ctr Bartlesville
Lawson, Pat '04 Ok-1 '29 Marietta
Lawson, Robert C. '16 Ill-11 '41 **I** 301 NW 12 OC
Lawton, W. P. '88 Tenn-6 '14 **S** El Reno
Layton, O. E. '07 Ok-1 '37 Collinsville
[5]LeBlanc, William '75 Md-3 '05 Ochelata
Ledbetter, Marion K. '21 Ok-1 '46 **Pd** 1453 S Quaker Tulsa
Lee, J. K. '98 Ok-1 '23 **I** 3102 S Harvard Tulsa

Lee, Otis S. '15 Pa-3 '38 Utica Sq Med Ctr Tulsa
Leebron, Wm. M. '13 Pa-1 '40 **S** Elk City
LeHew, Elton W. '04 Ok-1 '30 **Ob** Guthrie
LeHew, J. Leslie '01 Ok-1 '27 Guthrie
[5]LeHew, J. L. '68 Mo-20 '97 Pawnee
Lehman, Donald S. '15 Ill-11 '42 Elk City
Leibovitz, Martin '17 Ill-11 '42 **S** Med Arts Bg Tulsa
[5]LeMaster, D. W. '93 Ok-1 '24 Wayne
Lembke, Robert L. '17 Ok-1 '50 Pryor
Leney, Fannie Lou '02 Ok-1 '27 **Al** 525 NW 11 OC
Leonard, Charles E. '07 Ok-1 '32 **P** 528 NW 12 OC
Lerblance, William P., Jr. '18 Ok-1 '45 Hartshorne
Leslie, S. B., Jr. '16 Ok-1 '42 Okmulgee
[5]Leslie, S. B., Sr. '74 Col-4 '02 Okmulgee
Lester, Eugene F. '15 Ok-1 '41 **S** 515 NW 11 OC
Letcher, Charles Wesley '03 Pa-2 '30 Miami
Levy, Bertha M. '14 La-1 '38 **Pd** 1200 N Walker OC
Lewis, Ceylon S. '20 Mo-2 '45 **I** Med Arts Bg Tulsa
[5]Lewis, P. K. '79 Tenn-11 '01 Sapulpa
Lewis, R. W. '06 Ok-1 '32 Sulphur
Lewis, W. F. '11 Ok-1 '39 **U** 605 Gore Blv Lawton
Lhevine, Dave B. '22 Ok-1 '45 **R** Med Arts Bg Tulsa
[5]Lhevine, Morris B. '86 Ok-1 '17 **R** 1602 S Madison Tulsa
Lincoln, Richard B. '19 Ok-1 '46 **N** Med Arts Bg OC
Lindley, E. C. '05 Mo-2 '40 **S** 1305 N 10 Duncan
Lindley, E. H. '15 Mo-2 '40 1305 N 10 Duncan
Lindsay, J. H. '19 Ok-1 '50 Dewey
Lindsey, Ray H. '04 Ill-6 '29 **S** Pauls Valley
Lindstrom, W. Carl '10 Ok-1 '34 **OG** Utica Sq Med Ctr Tulsa
Lingenfelter, F. M. '97 Ok-1 '23 **S** 1200 N Walker OC
Lingenfelter, Paul B. '07 Ok-1 '33 **Pu** Clinton
[2]Lipnick, Louis '07 NY-7 '33 **R** V A Hosp Muskogee
Lisle, A. C., Jr. '19 Ok-1 '43 **NS** 1200 N Walker OC
Little, A. C. '07 Ok-1 '31 Minco
Little, John R. '06 Ok-1 '29 3626 N Western OC
Lively, C. E. '06 Ok-1 '34 **S** Med Arts Bg McAlester
Livingston, L. G. '05 Mo-2 '30 Cordell
Lockard, Vernon M. '20 Col-2 '45 **R** 500 E Frank Phillips Blv Bartlesville
Loescher, Thomas M. '24 Col-2 '49 Sapulpa
Loftin, Robert Love '13 Tex-4 '38 Broken Bow
Loney, W. R. R. '01 Minn-4 '26 **Ob** Med Arts Bg Tulsa
Long, LeRoy D. '97 Mass-1 '21 **S** Med Arts Bg OC
Long, Loyd L., Jr. '22 Ok-1 '46 921 14 NW Ardmore
Long, W. George '24 Ok-1 '52 Purcell
Lorentzen, Clifford L. '22 Ill-11 '47 **I** 301 W Bdwy Ardmore
Loucks, James E. '23 Ok-1 '47 Mil Serv
Loudon, James D. '14 Neb-5 '39 **I** 14 E 9 Shawnee
Loughmiller, Robert F. '12 Ok-1 '37 **OALR** 528 NW 12 OC
[5]Love, R. S. '88 Tenn-6 '17 **U** 2701 NW 19 OC
Lowbeer, Leo '01 Aust-7 '27 **Pa** Hillcrest Med Ctr Tulsa
Lowe, J. O. '96 La-1 '19 **S** Thompson Bg Tulsa
Lowe, Robert C. '09 Minn-4 '33 **I** 800 NE 13 OC
[2]Lowenstein, Bernard '08 Col-2 '33 Indian San Shawnee
Lowrey, Robert W. '11 Ok-1 '36 Poteau
Lowry, David C. '22 Ok-1 '46 **R** 528 NW 12 OC
Lowry, Dick Jr. '19 Ok-1 '45 **OALR** 1200 N Walker OC
Loy, C. F. '89 Ky-2 '16 **OALR** 927 NE 13 OC
Loy, Richard W. '20 Ok-1 '49 **S** Pawhuska
Loy, Robert L., Jr. '14 Ok-1 '47 **OG** 521 NW 11 OC
Loy, William A. '13 Ok-1 '37 **I** Pawhuska
[3]Loyd, Edward M. '78 Tenn-6 '07 **OALR** 305 Lake Dr Harlingen Tex
Lubin, E. N. '18 Ia-3 '43 **U** Med Arts Bg Tulsa
Lubin, Robert Irving '26 Ia-3 '49 **I** Univ of Ia Hosp Iowa City Ia
[3]Lucas, A. C. '71 Ia-1 '98 Castle
Lucas, Boyd V. '18 Ok-1 '42 **S** Med Arts Bg Tulsa
Lusk, Earl M. '12 Ark-1 '37 915 S Cinn Tulsa
Luton, James P. '07 Ok-1 '33 **Op** Med Arts Bg OC
Lynch, R. H. '95 Ok-1 '26 Hollis
[5]Lynch, Thomas J. '89 Pa-2 '10 2132 E 24 Tulsa
[3]Lyon, J. I. '69 Mo-8 '92 Edmond
Lyons, Mason R. '15 Ok-1 '40 Turley
Lysaught, J. Neill '20 Kan-2 '44 **Pd** 301 NW 12 OC

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Maben, Charles S. '01 Ark-1 '33 Okmulgee
Mabry, E. W. '82 Tenn-1 '07 Altus
[5]Mabry, William L. '80 Tenn-1 '07 4201 Pine Texarkana Tex
MacDonald, Daniel M. '91 O-6 '16 **OG** Utica Sq Med Ctr Tulsa
Macdonald, J. C. '91 Mass-7 '18 **OALR** 301 NW 12 OC
MacKercher, Peter A. '14 Ky-2 '40 Community Bg Ponca City
Macrory, Paul D. '17 Ok-1 '43 Bethany
Macumber, H. H. 13 Neb-5 '38 **I** 620 Choctaw Chickasha
Mahone, M. Wilson '15 Ok-1 '39 Hobart
Mall, W. W. '05 Neb-5 '32 **OALR** Community Bg Ponca City
Manning, Robert D. '25 Ont-6 '51 Westville
Manning, Wesley '15 Ok-1 '50 Pawhuska
Margo, Elias '97 Tex-2 '19 **Or** 605 NW 10 OC
Margo, Marvin K. '23 Ok-1 '48 **Or** 605 NW 10 OC
Margolin, Berthe '95 Tex-4 '17 **An** 2739 E 22 Tulsa
Maril, Joseph J. '12 Ok-1 '36 **S** Med Arts Bg OC
Maril, William D. '15 Ok-1 '40 **S** 807 NW 23 OC
Markland, James D. '94 Tenn-6 '36 **Al** Med Arts Bg Tulsa
Marks, W. R. '89 Ill-11 '12 Vinita
Martin, Charles E. '24 Ok-1 '48 Perry
Martin, C. M. '89 Ok-1 '15 Elgin
Martin, E. O. '97 Ok-1 '21 Cushing
Martin, Frank J. '18 Kan-2 '44 **I** Ada
Martin, Howard C. '04 Ok-1 '29 3626 N Western OC
[5]Martin, J. T. '82 Mo-34 '07 3110 Harvey Pkwy OC
Martin, James D. '13 Ok-1 '39 Cushing
Martin, John W. '06 Ok-1 '30 Cushing
Martin, Louis A. '22 Ark-1 '44 Sapulpa
Martin, Ralph F. '13 Ark-1 '47 Sand Springs
Mason, Rebecca H. '94 Ill-1 '25 **PH** OCW Chickasha
Masters, Herbert A. '10 Ok-1 '34 Tahlequah
Masters, Paul L. '25 Ok-1 '53 4405 SE 28 OC
Masterson, Maude M. '11 Ok-1 '36 **I** 1200 N Walker OC
Mathews, Dewey Lee '98 Tex-2 '22 Tonkawa
Mathews, Grady F. '89 Ok-1 '25 **PH** 3400 N Eastern OC
Mathews, Hugh H. '14 Mo-34 '41 **R** Bdwy Tower Enid
Mathis, James L. '25 Mo-34 '49 Elk City
Matt, John G. '11 Tenn-6 '35 **Pr** Med Arts Bg Tulsa
Matthews, Sanford '04 Ok-1 '37 **I** 1319 Classen Dr OC
Matthews, Virgil D. '19 Tenn-6 '45 1119 W Bdwy Muskogee

Matthey, Wm. A. '08 Ok-1 '50 Med Dental Bg Lawton
Mauldin, Howard Paul '26 Ok-1 '53 1303 SW 29 OC
Mauritson, Donald F. '23 Wis-6 '48 **R** Utica Sq Med Ctr Tulsa
Mayberry, R. H. '25 Ky-2 '50 **An** 800 NE 13 OC
Mayes, R. H. '15 Ok-1 '40 **PH** Anadarko
Mayfield, Robert C. '24 Ok-1 '50 **S** 216 E Eufaula Norman
[5]Mayfield, Warren T. '95 Ok-1 '20 Mountainberg Ark
Mays, Wm. Gordon '20 Pa-1 '51 Fairfax
Mazzarella, Vincent '14 Va-1 '39 Hominy
McAlester, L. S. '05 Neb-5 '29 **R** 228 Wall Muskogee
McAllister, D. L. '22 Tenn-6 '49 Bristow
[5]McBrayer, Wm. H. '71 Tenn-9 '99 Idabel
McBride, Earl D. '91 NY-1 '14 **Or** 605 NW 10 OC
McBride, Ollie '02 Ok-1 '37 **I** Ada
[5]McCalib, D. C. '85 Mo-28 '08 Colbert
McCarley, T. H. '83 Ky-2 '07 Med Arts Bg McAlester
McCauley, D. W. '17 Ok-1 '43 **Pu** Okmulgee
McCluer, Shirley '27 La-5 '52 Okla A & M Stillwater
McClure, C. W. '14 Ok-1 '40 **Op** 415 NW 11 OC
McClure, H. M. '03 Ill-6 '29 **S** 620 Choctaw Chickasha
[3]McClure, P. L. '76 Ark-1 '07 Ft Cobb
McCollum, W. T. '16 Ok-1 '40 **I** 437 NW 12 OC
[5]McConnell, L. H. '71 Tenn-9 '01 Altus
McCrary, Robert F. '21 Ark-1 '45 **OG** City Hosp St Louis Mo
McCreight, William G. '11 Ok-1 '40 **D** 525 NW 11 OC
McCroskie, M. R. '84 Mo-33 '11 Fairview
McCurdy, W. C., Jr. '10 La-1 '36 Purcell
McDaniels, Samuel J. '17 Ark-1 '47 Mil Serv
McDonald, Glen W. '11 Ok-1 '34 **OG** Pawhuska
McDonald, John E. '03 Mo-34 '26 **Or** Utica Sq Med Ctr Tulsa
McDougal, B. B. '19 Tex-12 '44 Petroleum Bg Chickasha
McDowell, Richard E. '20 NY-6 '43 **S** 222 E 5 Tulsa
McDowell, Thomas A. '18 NY-45 '44 Med Arts Bg Tulsa
McElroy, Thomas '92 O-40 '16 **S** Community Bg Ponca City
McGee, J. P. '91 Ga-5 '16 **OALR** 1200 N Walker OC
McGill, Ralph A. '96 Ok-1 '22 **S** Utica Sq Med Ctr Tulsa
McGolrick, Jack B. '14 Tex-12 '46 Mil Serv
McGovern, J. D. '86 Tenn-1 '10 Wewoka
McGrath, T. J. '02 Ok-1 '27 Sayre
McGraw, W. L. '11 Ok-1 '44 1332 S Lewis Tulsa
McGrew, E. A. '98 Ia-3 '24 Beaver
McHenry, L. Chester '01 Mass-1 '25 **ALR** Med Arts Bg OC
McInnis, Dalton Blue '20 Ok-1 '45 2912 S Walker OC
McInnis, J. Thermon '10 Ok-1 '37 2912 S Walker OC
McIntosh, R. K., Jr. '13 Ok-1 '37 Tahlequah
McIntyre, John A. '16 Ok-1 '43 Bdwy Tower Enid
McIntyre, Ray V. '23 Ok-1 '51 Kingfisher
McKee, Robert '14 Tex-2 '39 **OG** 522 NW 13 OC
[3]McKeel, Sam A. '70 Tenn-8 '01 Ada
McKinney, G. Y. '86 Ark-1 '12 Henryetta
McKinney, Milan F. '04 Ok-1 '30 **I** Med Arts Bg OC
McLauchlin, James R. '16 Ok-1 '43 **S** 528 NW 12 OC
McMillan, James Moughan '04 Ok-11 '33 Vinita
McNaughton, G. P. '87 Tenn-8 '12 **R** Miami
McNeill, P. M. '98 Ok-1 '23 **I** Med Arts Bg OC
McShane, William R. '22 DC-1 '47 **OG** Utica Sq Med Ctr Tulsa
[5]McVey, G. M. '82 Ky-2 '08 Verden
Means, Royce B. '24 Ok-1 '47 1202 Arlington Lawton
Meares, C. H. '23 Ok-1 '52 301 Baltimore Muskogee
Mechling, Geo. S. '05 Ok-1 '32 **An** Central State Hosp Norman
Medearis, P. H. '87 Ky-2 '16 Tahlequah
Meek, Milton P. '22 Tenn-6 '45 **Pd** 1202 Arlington Lawton
[4]Meiers, Robert Lee '23 La-1 '47 V A Hosp Topeka Kan
Melinder, Roy J. '14 Tenn-6 '38 Claremore
Melton, A. S. '85 Ark-1 '12 Okemah
Mengel, Chester K. '15 Ok-1 '39 **Or** V A Hosp Muskogee
Mercer, J. Wendall '99 Ok-1 '25 First Natl Bg Enid
Mercer, R. D. '21 Ok-1 '51 **An** 927 NE 13 OC
Merkley, George E., Jr. '17 Ok-1 '52 Boise City
Merrell, Webber W. '12 Ok-1 '42 Guthrie
Merrifield, Fred R. '13 SC-1 '49 617 S Quincy Enid
Merrifield, Vernon C. '18 Ok-1 '45 **S** 215 S 4 Ponca City
Merritt, Iva S. '00 Man-1 '25 650 Lindsay Rd Norman
Mery, Albert M. '14 Col-2 '43 **I** 345 Boston SE Bartlesville
Messenbaugh, J. F. '11 Ok-1 '33 **S** 1111 N Lee OC
Messinger, R. P. '12 Ok-1 '38 **I** 807 NW 23 OC
Meyers, William A. '90 Ok-1 '27 2000 Memorial Dr Tulsa
Michols, Raymond M. '24 DC-1 '49 **Or** Utica Sq Med Ctr Tulsa
Mileham, Jack '14 Ok-1 '46 Chandler
Miles, J. B. '03 Ok-1 '27 **S** Anadarko
Miller, D. Evelyn '98 Neb-5 '28 Memorial Station Muskogee
Miller, George H. '90 Mo-31 '17 **S** Atlas Life Bg Tulsa
Miller, Jess E. '24 Ok-1 '47 **U** 1200 N Walker OC
Miller, Loren V. '24 NC-7 '47 **Pd** 3102 S Harvard Tulsa
Miller, O. H. '00 Ind-20 '25 400 NW 13 OC
Miller, O. H. '96 Tex-4 '20 **OALR** Ada
Miller, W. C. '90 DC-1 '12 **OALR** Guthrie
Miller, Wm. A. '25 Ok-1 '47 **Or** 1200 N Walker OC
Milligan, E. F. '85 Col-5 '05 Geary
Mills, R. C. '92 Ok-1 '28 **Ob** Hightower Bg OC
Ming, C. M. '88 Mo-2 '10 **R** Okmulgee
Minor, Robert West '84 Tenn-5 '12 Spiro
[5]Minor, S. W. '71 Tenn-6 '05 Hinton
Mishler, D. L. '04 Ia-3 '29 **Pl** 604 S Cinn Tulsa
Mitchell, Clarence '97 Ok-1 '31 Univ Infirmary Norman
Mitchell, J. N. '10 La-1 '35 Security Bg Lawton
Mitchell, Tom Hall '00 Va-4 '31 **Ind** Natl Bk of Tulsa Bg Tulsa
[5]Mitchner, W. C. '75 Tenn-8 '02 **I** Okmulgee
Mogab, John H. '19 Ok-1 '43 El Reno
Mohler, E. C. '07 Ill-6 '39 Community Bg Ponca City
[5]Mohrman, S. S. '78 Mo-7 '07 5500 S Peoria Tulsa
[2]Mollica, Stephen G. '93 Mich-7 '17 V A Municipal Aud Kansas City Mo.
Mollison, Malcolm '22 Ok-1 '46 Altus
Monfort, M. Felicia '25 Ok-1 '50 **P** Central State Hosp Norman
Monroe, Hugh H. '96 Tenn-5 '21 Pauls Valley
Moor, Hiram D. '86 Ill-1 '29 1409 N Portland OC
Moore, C. D. '97 Tex-4 '22 119 N Robinson OC

Moore, Charles F. '83 Mo-34 '09 **OALR** Durant
Moore, Clifford W. '03 Ok-1 '27 **PH** 423 Main Stillwater
Moore, Edward L. '14 Mo-34 '39 **S** Utica Sq Med Ctr Tulsa
Moore, Ellis '90 Ok-1 '21 **U** Med Arts Bg OC
Moore, John M. '23 Ok-1 '52 Pauls Valley
Moore, Matthew B. '19 Pa-12 '43 **OG** Utica Sq Med Ctr Tulsa
Moore, Samuel T. '13 Ok-1 '38 **Or** 411 NW 11 OC
Moore, Wm. R. '24 Ok-1 '53 425½ SW 44 OC
Moorman, James Floyd '00 Ky-2 '25 **Pu** 1220 N Walker OC
Morey, John '04 NY-6 '27 **I** Ada
Morgan, C. A. '99 Ok-1 '29 Home State Life Bg OC
Morgan, Carl C. '21 Ok-1 '46 **An** 2010 S Utica Tulsa
Morgan, C. Wesley '11 Tenn-7 '39 600½ NE 4 OC
Morgan, James E. '04 Mo-34 '30 **OALR** Guymon
Morgan, N. L. '20 Ok-1 '50 Cherokee
Morgan, Robert J. '19 Ok-1 '44 **D** 1111 N Lee OC
Morgan, Vance F. '09 Ok-1 '34 Harrah
Morledge, Walker '90 O-6 '19 **I** 1220 N Walker OC
Morrison, H. C. '96 Tenn-6 '24 **Ob** 807 NW 23 OC
Morrison, J. W. '17 Ok-1 '44 **I** 1200 N Walker OC
Morrow, B. L. '86 Tenn-8 '11 Salina
[3]Morrow, John A. '75 Tenn-8 '04 **OALR** Sallisaw
Morton, R. W. '11 Ok-1 '40 Sulphur
Mosher, D. D. '95 Ok-1 '26 Seminole
Mosley, K. T. '06 La-1 '31 **PH** 801 NE 13 OC
Mote, Paul '98 Ok-1 '24 Sapulpa
Mote, W. R. '04 Ok-1 '27 **Op** 208 W Bdwy Ardmore
[5]Moth, M. V. '89 Tex-2 '11 2001 N Lottie OC
Mount, Houston F. '23 Ok-1 '46 **OG** 3102 S Harvard Tulsa
Moxley, Joe N. '10 Ga-5 '35 **OALR** 825 W Bdwy Ardmore
Mulmed, Earl I. '15 Ok-1 '37 **I** Utica Sq Med Ctr Tulsa
Mulvey, B. E. '06 Ok-1 '30 **R** 1111 N Lee OC
Munding, Linus A. '06 Mo-34 '32 Utica Sq Med Ctr Tulsa
Muntz, E. R. '08 Wis-5 '32 **OG** Ada
Murdoch, Raymond L. '93 Mo-2 '19 **Pr** Med Arts Bg OC
Murdock, H. D. '79 Ill-1 '05 **S** Med Arts Bg Tulsa
Murphree, J. '24 Ok-1 '47 **R** 617 E Brookfield Ponca City
Murphy, Ralph W. '23 Ok-1 '49 Mil Serv
Murray, E. Cotter '03 Ok-1 '30 27 W Commerce OC
Murray, Ella H. '11 Ok-1 '49 905 NW 95 OC
[5]Murray, Silas '81 Tenn-6 '07 211 Sunset Dr Tulsa
Musallam, Sam N. '13 Leb-1 '37 **I** Med Arts Bg OC
Musick, Elmer R. '97 Ill-6 '22 **I** Med Arts Bg OC
Mussil, W. M. '98 Tex-4 '24 **OALR** Med Arts Bg OC
[3]Myers, David A. '75 Que-1 '98 1250 Jones St San Francisco Cal
Myers, Jack W. '17 Ok-1 '43 El Reno
[1]Myers, Jack Paul '24 Tenn-6 '47 **I** Okmulgee

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Nagle, Patrick S. '02 Ok-1 '28 1021 N Lee OC
Nathan, Robert E. '11 Italy-6 '36 **I** Med Arts Bg Tulsa
Navin, Kenneth '07 Neb-6 '33 **PH** 218 N Philadelphia Shawnee
Neal, James H., Jr. '19 Ok-1 '43 **S** 915 S Cinn Tulsa
Neal, James H., Sr. '84 Ark-1 '12 **PH** 521 N Boulder Tulsa
Neal, Laile G. '98 Ok-1 '25 **OG** Community Bg Ponca City
Needham, C. F. '89 Ok-1 '24 **Ob** Ada
Neel, Roy L. '05 Ok-1 '38 **R** 521 NW 11 OC
Neely, Shade D. '97 Ok-1 '20 **U** Commercial Natl Bg Muskogee
Neff, Everett B. '11 Ok-1 '36 **S** 1200 N Walker OC
Neilson, W. P. '03 Mo-2 '27 **S** Bdwy Tower Enid
Nelson, Arnold G. '21 Ok-1 '52 7016 SE 15 Midwest City
Nelson, F. J. '96 Ill-1 '30 **I** 2020 S Xanthus Tulsa
Nelson, F. L. '84 Ark-1 '06 2303 E Third Tulsa
Nelson, Harold G. '16 Kan-2 '45 **I** 408 Main Stillwater
Nelson, Iron H. '99 Ok-1 '40 **Pa** Med Arts Bg Tulsa
Nelson, M. O. '97 Minn-4 '23 **D** Med Arts Bg Tulsa
[3]Nesbitt, P. P. '77 Ill-6 '03 **S** 1565 Swan Dr Tulsa
Neumann, Milton A. '06 Ok-1 '30 **S** Okarche
Newell, W. B. Jr. '13 Tenn-5 '37 230 S 5 Enid
Newell, W. B., Sr. '87 Tenn-1 '10 Bdwy Tower Enid
Newlin, Frances P. '97 Ok-1 '21 Masonic Bg Shawnee
Newlin, W. H. '04 Ok-1 '32 Broken Arrow
Newman, Floyd '06 Tenn-6 '31 **OALR** Shattuck
Newman, M. Haskell '07 Tenn-6 '32 **S** Shattuck
Newman, Roy '03 Tex-4 '32 **Pd** Shattuck
[2]Nichol, Byron A. Washington 12 DC
Nicholas, Hugh B. '11 Ok-1 '48 Mil Serv
Nicholson, Ben H. '04 Tenn-5 '28 **Pd** 301 NW 12 OC
Nicholson, J. L. '04 Ok-1 '31 Univ Infirmary Norman
Nielsen, Gertrude '95 Germ-11 '23 310 S Univ Blv Norman
[3]Niemann, G. H. '82 Ill-6 '05 **S** 417 S 8 Ponca City
Nienhuis, Lester I. '22 Mich-1 '46 **S** Utica Sq Med Ctr Tulsa
Noell, R. L. '99 Ok-1 '28 **Or** 1111 N Lee OC
Norfleet, Edward K. '24 Ark-1 '52 Sapulpa
Norman, Earle T. '02 Tex-4 '28 **Ind** Phillips Petroleum Co Bartlesville
Norman, S. L. '20 Tex2 '45 **I** 3rd & Seminole McAlester
Northcutt, C. E. '92 Tenn-6 '15 **S** Masonic Bg Ponca City
Northrip, Ray U. '09 Ok-1 '38 **Pa** Ada
Northrup, L. C. '93 Neb-5 '19 **OG** 1307 S Main Tulsa
Northrup, Robert A. '25 Ok-1 '48 **OG** 1307 S Main Tulsa
Nuckols, A. S. '84 Mo-28 '06 Community Bg Ponca City

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Oakes, C. G. '08 Kan-2 '34 Sapulpa
Obermann, Charles F. '02 Ia-3 '30 Med Arts Bg OC
Obermiller, R. G. '05 Ok-1 '32 Woodward
O'Donoghue, Don H. '01 Ia-3 '26 **Or** 1111 N Lee OC
[1]Oesterreicher, Donald L. '21 Ok-1 '49 **S** 5108 N Miller OC
Ogg, Kenneth G. '21 Ok-1 '48 2420 Classen Blv OC
Oglesbee, Carson L. '06 Ok-1 '37 Manhattan Bg Muskogee
Oldham, I. B. '00 Tenn-6 '25 426 N 6 Muskogee
O'Leary, Charles M. '09 Ok-1 '34 **S** Med Arts Bg OC
[5]O'Leary, D. W. '73 Tenn-11 '04 518 N Park Norman
Olson, Donald H. '17 Ok-1 '43 Vinita
Olson, Forrest W. '23 Ok-1 '48 909 SW 29 OC
O'Meilia, W. J. '22 Mo-34 '46 **I** Braniff Bg Tulsa
Opper, Marshall '19 Ok-1 '44 909 SW 29 OC
Orr, Herbert S. '17 Ok-1 '42 **OG** 1645 E 15 Tulsa
Osborn, Carl D. '21 Tex-12 '45 Ada
Osher, William J. '21 NY-8 '45 **I** Med Arts Bg Tulsa
Ottis, Paul J. '21 Ok-1 '45 Okarche

Owens, J. N. Jr. '16 Tenn-5 '38 **Pa** 605 NW 10 OC
Oxley, W. N. '18 Ok-1 '44 Guymon
Ozment, Thomas L. '15 Mo-2 '41 **Op** 604 S Cinn Tulsa

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Padberg, E. D. '12 Ok-1 '40 **I** Ada
Palik, Emil E. '09 Ia-3 '36 **Pa** 1923 S Utica Tulsa
Paramore, C. F. '98 Ok-1 '24 Med Arts Ctr Shawnee
Park, Felix R. '05 Mich-1 '30 Med Arts Bg Tulsa
Park, John F. '87 Pa-2 '14 **S** 3rd & Seminole McAlester
Parker, James W. '21 Ok-1 '46 **S** 801 Pershing Dr Lawton
Parker, Joe M. '08 Mo-2 '38 **S** 411 NW 11 OC
Parmenter, D. C. '90 Mass-1 '17 **I** 1204 S Cheyenne Tulsa
Parrish, J. M., Jr. '10 Tenn-6 '34 **G** 522 NW 13 OC
Parrish, Jack W. '25 Ok-1 '53 Seminole
Parrish, Pamela P. '21 Ok-1 '44 **I** 621 NW 40 OC
Parrish, R. Gibson '18 Ok-1 '44 **An** 620 NW 9 OC
Parsons, O. L. '07 Ok-1 '33 **OG** 511 E Ave Lawton
Paschal, Wm. R. '20 Ok-1 '45 **I** 430 NW 12 OC
Pascucci, Lucien M. '09 Conn-1 '34 **R** Utica Sq Med Ctr Tulsa
Patten, Wm. Robert '25 Ok-1 '52 502 S Crawford Norman
Patterson, Fred L., Jr. '09 Tenn-6 '39 **OALR** 810½ Main Duncan
Patterson, F. L. '86 Mo-22 '06 **OALR** 810½ Main Duncan
Patterson, James L., Sr. '84 Mo-22 '06 **S** 6 N 9 Duncan
Patzer, Reynold '06 Cal-12 '45 **S** 217 NW 13 OC
Paulson, Alvin W. '07 Mo-2 '32 927 NE 13 OC
Paulus, D. D. '88 Ill-6 '14 **I** 301 NW 12 OC
Pavy, C. A. '82 Ind-20 '11 **OALR** Med Arts Bg Tulsa
Payne, Ralph E. '08 Ok-1 '48 Edmond
Payne, Richard '18 Ok-1 '43 **I** 800 NE 13 OC
Payte, J. I. '96 Ok-1 '30 2429 Aurora Ct OC
Peacher, Kenneth Lee '24 Ok-1 '48 Mil Serv
Pearson, Ernest B. '86 Ill-1 '13 **I** 1705 E Bdwy Enid
Peden, James C. '89 Pa-1 '14 Med Arts Bg Tulsa
Pendleton, John Winston '89 Tex-3 '12 Kingfisher
Penick, Grider '95 Mo-2 '20 **OG** Colcord Bg OC
[5]Perry, Daniel L. '00 Ok-1 '26 **I** 815 S. Gary Tulsa
Perry, Fred '12 Ok-1 '36 Braniff Bg Tulsa
Perry, Fred T. '08 Ok-1 '33 Watonga
Perry, Hugh '02 Ok-1 '26 **S** 222 E 5 Tulsa
Perry, John C. '94 Ok-1 '23 Med Arts Bg Tulsa
Perry, John M., Jr. '21 Ok-1 '46 **Ind** 515 NW 11 OC
Perryman, Robert G. '22 Ok-1 '46 **S** 2020 S Xanthus Tulsa
Peter, Maurice L. '08 Ok-1 '33 **PH** Municipal Bg OC
Peters, James C. '15 Ok-1 '44 **I** 915 S. Cinn Tulsa
Peters, Myra Ann '24 Ala-2 '49 **Or** Med Arts Bg Tulsa
Peterson, William G. '04 Pa-12 '30 **OALR** Ada
[5]Petty, C. S. '71 Ill-10 '97 Guthrie
Petty, James S. '09 Ok-1 '35 Guthrie
Phelan, Ralph S. '15 Ok-1 '39 Hobart
Phelps, Joseph T. '90 Ok-1 '19 **OALR** El Reno
Phelps, Malcom E. '05 Ia-3 '29 El Reno
Pickard, John C. '01 Ok-1 '26 **ALR** 1111 N Lee OC
Pierson, Dwight D. '05 Ok-1 '32 Mangum
[5]Pierson, Orra A. '67 Ia-10 '03 Woodward
[5]Pigford, R. C. '98 La-1 '24 **C** 2427 E 26 Tulsa
Pinkerton, Clarence B. '25 Ok-1 '53 Pryor
Pittman, Cole D. '08 Tenn-6 '33 **OALR** 303½ Johnstone Bartlesville
Pitts, James B. Jr. '18 Ok-1 '46 **OG** 1111 N Lee OC
[5]Poer, E. M. '74 Tex-3 '08 Mangum
Points, Thomas C. '17 Ok-1 '41 **OG** 623 NW 10 OC
Pollack, Simon '11 Ill-1 '35 **R** Utica Sq Med Ctr Tulsa
Pollock, Ira O. '20 Mo-2 '44 **S** 1200 N Walker OC
Pollock, John R. '20 DC-1 '46 **OALR** 825 W Bdwy Ardmore
Porter, Horace H. '02 Neb-5 '29 1419 E 15 Tulsa
Porter, W. H. '21 Ok-1 '51 4405 SE 28 OC
[3]Postelle, J. M. '65 Md-6 '94 611 W Mulberry San Antonio Tex
Pounders, Carroll M. "92 La-1 '18 **Pd** 1220 N Walker OC
Powell, P. T. '14 Ok-1 '41 Community Bg Ponca City
Pratt, T. W. '95 Ok-1 '38 **OALR** Rt 1 Box 536 Muskogee
Pratt, Wm. C. '12 Mo-2 '38 **S** 604 S Cinn Tulsa
Prentess, H. M. '92 Ok-1 '18 Nowata
[5]Presson, L. C. '81 Mo-7 '09 1948 N Main Tulsa
[5]Price, J. T. '73 Mo-10 '05 Seminole
Price, Joel S. '02 Ok-1 '28 1200 N Walker OC
Prosser, Moorman '10 Ok-1 '35 **PN** Med Arts Bg OC
Puckett, Carl '82 Mo-7 '05 **PH** PO Box 1661 OC
Puckett, H. L. '03 Mich-1 '31 **S** 1601 W 9 Stillwater
Pugsley, William S. '21 Ok-1 '45 **I** 301 NW 12 OC
[1]Pullen, Lee '13 Pa-9 '40 Waurika

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Raff, Joseph S. '02 Que-1 '27 Madill
Rafter, John R. '12 Neb-6 '38 **R** Manhattan Bg Muskogee
Ragan, Tillman A. '03 Ok-1 '32 619 W Boyd Norman
Rahhal, George M. '17 Ok-1 '45 Atoka
Rainer, Jeanne Elise McKinnon '13 Ok-1 '41 **Pd** 1111 N Lee OC
Ramsay, David C. '19 Ill-6 '44 **Or** Ada
Randels, George R. '23 Ok-1 '52 7016 SE 15 Midwest City
Ray, C. Cody '18 Ok-1 '50 Pawhuska
Ray, R. G. '07 Ok-1 '33 **S** 3015 E 15 Tulsa
Records, J. W. '11 Mo-2 '36 **OG** 301 NW 12 OC
Reding, Anthony C. '09 Ok-1 '35 514 W 9 Stillwater
Redmond, Robert F. '22 Ok-1 '47 521 NW 11 OC
Redus, Lonnie C. '20 Tex-12 '50 Weatherford
Reed, James R. '00 Ok-1 '24 **Op** Med Arts Bg OC
Reese, K. C. '93 La-1 '23 **Pd** Utica Sq Med Ctr Tulsa
Reichert, R. J. '99 Ia-3 '30 **I** 412 W Hayes Norman
Reichmann, Ruth S. '98 Mich-1 '25 124 NW 15 OC
Reid, John R. '94 Ok-1 '21 2420 Classen Blv OC
Reid, Roger J. '03 Man-1 '31 212 First SW Ardmore
Reiff, William H. '18 Ok-1 '41 **I** 437 NW 12 OC
Rempel, Paul H. '07 Ok-1 '34 Bdwy Tower Enid
[5]Renegar, J. F. '73 Ky-2 '06 Tuttle
Renfrow, William B. '14 Ok-1 '50 **An** 620 NW 9 OC
Rentfrow, J. W. '20 Ok-1 '50 Bristow
Revere, S. D. '09 Pa-2 '35 **I** 620 Choctaw Chickasha
Rewerts, F. C. '93 Kan-2 '24 **I** First Natl Bk Bg Bartlesville
Reynolds, Bill J. '22 Ok-1 '49 106½ Mid-America Midwest City
Reynolds, Charles '27 Tex-12 '49 **S** Weleetka
Reynolds, Ernest W., Jr. '20 Ok-1 '46 Univ Hosp Ann Arbor Mich
Reynolds, Ernest W., Sr. '88 Mo-20 '10 1307 S Main Tulsa
[3]Reynolds, James L. '72 Mo-28 '98 **OALR** 1516 N Cinn Tulsa

Reynolds, John H. '13 Ark-1 '40 1119 W Bdwy Muskogee
Reynolds, John, Sr. '74 Ky-4 '03 First Natl Bk Bg Muskogee
Reynolds, S. W. '91 Ok-1 '14 Drumright
Rhea, Thomas E. '20 Tenn-6 '45 Idabel
Rhine, J. Richard '22 Ok-1 '53 Turley
[5]Rhodes, Robert E. Lee '76 Tex-6 '05 2220 S St Louis Tulsa
Rhodes, Wm. H. '76 Md-9 '02 **OALR** 1714 W Oklahoma Enid
Rice, E. Eugene '99 Ill-6 '25 **S** Amer Natl Bk Bg Shawnee
[5]Rice, O. W. '71 Ill-1 '97 **Ind** 433 N 2 McAlester
[3]Richardson, D. P. '69 Ky-4 '94 Union City
Richardson, Jack Leahy '14 NY-1 '39 **Or** 1916 S Utica Tulsa
[3]Richey, Sidney M. '69 Mo-7 '95 4748 S 33 Way Tulsa
Ricks, James R. '14 Ok-1 '38 **I** Med Arts Bg OC
Riddle, H. K. '90 O-2 '13 Coweta
Ridgeway, Elmer, Jr. '17 Ok-1 '40 2750 NW 23 OC
[3]Riely, Lea A. '74 Ky-2 '98 Rt 1 Brooks Rd New Canaan Conn
Rigg, Robert Rolland '94 Neb-5 '37 A & M College Infirmary Stillwater
Rigual, Jose R. '26 Ok-1 '50 **ALR** 2033 NW 31 Ter OC
Riley, James T. '80 NY-3 '07 El Reno
Riley, Noland C. '15 Ark-1 '42 Mil Serv
Ringrose, R. F. '00 Ia-3 '27 **S** Guthrie
Rippy, Orville M. '13 Ok-1 '39 **I** 1701 W 9 Stillwater
Risser, A. S. '77 Mo-20 '05 **S** Blackwell
Ritter, N. R. '18 Kan-2 '42 **Ind** Picher
Ritzhaupt, Louis H. '91 DC-1 '17 **S** Guthrie
Rix, R. Alvin, Jr. '17 Tex-2 '41 **NS** 525 NW 11 OC
Robberson, Morton E. '10 Ok-1 '34 Wynnewood
Roberts, Charles J. '09 Ill-6 '35 **I** 617 S Quincy Enid
Roberts, R. E. '02 Ok-1 '26 **S** 1610 W 9 Stillwater
[5]Roberts, S. P. '74 Va-6 '01 Nowata
Roberts, T. R. '91 Ga-5 '19 Wright Bg Tulsa
Robertson, C. W. '02 Ok-1 '28 Chandler
Robertson, Edwin N. Jr. '11 Mo-2 '37 **Op** 301 NW 12 OC
Robertson, Gerald G. '21 Ark-1 '51 1324 E 50 Tulsa
Robinson, Donald F. '22 Tenn-6 '49 Univ Infirmary Norman
Robinson, Earl M. '18 Ok-1 '43 **S** 1101 E Bdwy Enid
Robinson, Earl W. '17 La-1 '42 **An** 617 S Quincy Enid
Robinson, F. P. '89 Ok-1 '14 Pond Creek
Robinson, J. H. '94 Ok-1 '25 **S** 301 NW 12 OC
Robinson, Lillian H. '18 La-1 '42 617 S. Quincy Enid
Roddy, John A. '84 Pa-2 '07 **C** 521 NW 11 OC
Rogers, C. L. '76 Mo-7 '19 Canton
Rogers, Gerald '07 Ok-1 '30 **OG** 1111 N Lee OC
[5]Rogers, J. W. '89 Mich-1 '13 **U** 1323 E 27 Tulsa
[5]Rogers, McLain '74 Ga-11 '02 **S** Clinton
Rolle, Paul N. '07 Ok-1 '30 Poteau
Rollins, James H. '20 Ok-1 '44 Univ Hosp Graz, Austria
Rollins, John G. '23 Ok-1 '50 Prague
[4]Rose, Dayton M. '23 Ok-1 '48 800 NE 13 OC
Rosier, Harold A. '13 Kan-2 '40 **S** Waurika
Ross, George T. '07 Ok-1 '35 1101 E Bdwy Enid
Ross, Hope S. '10 Ok-1 '35 1101 E Bdwy Enid
[3]Ross, S. P. '62 Tex-4 '02 1410 Camden Way OC
Rountree, Charles '98 Mo-2 '24 **Or** 525 NW 11 OC
Royer, Charles A. '07 Kan-2 '32 **Op** 430 NW 12 OC
Royster, R. L. '05 Ok-1 '30 Purcell
Rubin, H. J. '12 Pa-9 '37 **Pd** 1916 S Utica Tulsa
Rucks, W. W. Jr., '03 Tenn-5 '28 **I** 301 NW 12 OC
[5]Rucks, W. W., Sr. '74 Tenn-5 '97 **I** 301 NW 12 OC
Ruhl, N. E. '79 Mo-20 '06 Rt 2 Box 258 F OC
Ruprecht, H. A. '03 O-6 '28 **C** 604 S Cinn Tulsa
Russell, G. R. '99 O-6 '25 **Pd** 604 S Cinn Tulsa
Russell, Henry T. '23 Mo-2 '47 **Pa** 502 S Lincoln Enid
Russell, Richard '96 Mo-34 '25 Miami
Russell, Richard Lee '26 Ok-1 '49 Mil Serv
Russo, Peter E. '04 Mo-34 '30 **R** 1200 N Walker OC
[5]Rutherford, S. C. '69 Ark-1 '01 Locust Grove
Rutherford, V. M. '07 Ok-1 '32 328 E Aeronca Midwest City
Rutledge, B. J. '25 Ok-1 '48 **NS** 1200 N Walker OC
Ryan, Dana C., Jr. '25 Mo-2 '52 1305 N 10 Duncan
Ryan, Henry G. '23 Ok-1 '47 Healdton
Ryan, Robert O. '02 Ok-1 '37 209 S Crawford Norman

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Saddoris, M. L. '02 Ok-1 '27 Cleveland
Salamy, Joseph '19 Ok-1 '44 2523 E 11 OC
Salomon, A. L. '89 Ky-2 '10 **Pd** 1111 N Lee OC
Sanders, H. M. '97 Tenn-14 '19 Boley
Sanders, Harold R. '13 Ok-1 '43 **Ob** 408 S Main Stillwater
Sanger, Fenton A. '00 Ok-1 '26 921 NW 23 OC
Sanger, W. B. '12 Ok-1 '35 **OG** Med Arts Bg Tulsa
[5]Sanger, Winnie M. '77 Kan-3 '04 **OG** 1501 Camden Way OC
Sanger, Welborn W. '06 Ok-1 '31 **Op** 1111 N Lee OC
Sapper, H. V. L. '20 Ok-1 '44 **Pd** 430 NW 12 OC
Sawyer, R. E. '77 O-2 '05 **S** Durant
[2]Saylor, Robert M. '03 Ok-1 '29 **Pu** Box 306 Shawnee
Schaff, Hartzell V. '19 Ok-1 '42 Holdenville
Schmidt, Arthur E. '23 Mo-2 '46 **I** 521 NW 11 OC
Schmidt, Helen H. '19 Ok-1 '48 **R** 14 E 9 Shawnee
Schmidt, Loraine '21 Ill-6 '48 **PH** Sapulpa
[1]Schneider, Edward M. '22 O-41 '46 **I** 921 NE 13 OC
Schneider, Robert A. '17 Minn-4 '42 **I** 800 NE 13 OC
Schreck, Philip M. '12 Tex-4 '36 **I** Med Arts Bg Tulsa
Scism, Mollie '97 Ky-2 '20 Walters
Scott, H. A. '85 Tenn-19 '11 **S** Commercial Natl Bg Muskogee
Scott, John Edward '20 La-5 "44 **I** 421 S Cherokee Bartlesville
[5]Seaborn, T. L. '87 Tenn-9 '01 Ada
Searle, M. J. '93 Pa-2 '20 **Pd** Med Arts Bg Tulsa
Seba, Chester '10 Ok-1 '38 1925 NW 23 OC
[5]Seba, W. E. '84 Mo-7 '05 Leedey
Seelig, Darrel A. '24 Ok-1 '53 Chandler
Sellers, Fred W. '11 Tex-4 '37 Mangum
Sepkowitz, Samuel '22 Tex-2 '47 67 & May Ave OC
Serwer, Milton J. '04 Ill-1 '30 **OG** 1200 N Walker OC
Sethney, Walter F. '12 NY-1 '38 **Pd** 2828 E 15 Tulsa
Shackelford, John W. '02 La-1 '26 **PH** 3400 N Easttern OC
Shackelford, Paul O. '20 Ok-1 '44 Mil Serv
Shadid, Alexander '14 Tenn-6 '38 Elk City
Shadid, Fred V. '16 Ok-1 '40 3200 N May Ave OC
Shaffer, Jerome D. '17 Pa-2 '44 **Pd** 1200 N Walker OC
Shanks, Edwin P. '21 Ok-1 '46 **OG** 617 S Quincy Enid
Shapard, Edwin R. '18 La-1 '44 **OG** Utica Sq Med Ctr Tulsa
Shapiro, David '11 Tex-2 '38 1129 E 15 Tulsa
Shaver, S. R. '05 Ok-1 '37 **OALR** 430 NW 12 OC

[1]Shaw, Geo. W. '28 Tex-12 '53 Holdenville
Shead, William L. '21 La-1 '49 311 W Main Norman
Sheets, Marion E. '00 Ok-1 '28 310 S 5 Enid
Shelby, Richard D. '18 Pa-12 '42 **S** 620 Choctaw Chickasha
Shelton, B. Wright '03 Mo-2 '28 **S** Miami
[5]Shelton, John W. '75 Mo-7 '96 632 S Coronado Los Angeles Cal
Shepard, R. M. '89 Tenn-6 '13 **Pu** Med Arts Bg Tulsa
Shepard, R. M., Jr. '19 La-1 '41 **S** Med Arts Bg Tulsa
Shepard, S. C. '99 La-1 '24 **I** Utica Sq Med Ctr Tulsa
Sheppard, Mary V. S. '92 Ill-1 '31 **I** Med Arts Bg Tulsa
Sherwood, R. G. '86 Neb-5 '17 **OG** Court Arcade Tulsa
[5]Shi, Augustin H. '74 Tex-4 '98 Stratford
Shields, Herbert B. '12 Ok-1 '37 **Op** Bdwy Tower Enid
Shipman, William H. '72 Ky-4 '04 922 Cherokee Bartlesville
Shipp, J. D. '10 Ok-1 '33 **Pr** Med Arts Bg Tulsa
Shircliff, E. E. '13 Kan-2 '39 107 NW 14 OC
Shirley, Edward T. '10 Ok-1 '34 Wynnewood
[2]Shoemaker, H. A. Ph.D. '96 Conn-1 '31 801 NE 13 OC
Shorbe, Howard '09 Ill-6 '34 **Or** 605 NW 10 OC
Short, L. O. '19 Ok-1 '51 Frederick
Showman, W. A. '96 Mo-2 '21 **D** Med Arts Bg Tulsa
Shriner, Richard F. '21 Ok-1 '44 Hobart
Shryock, Leland F. '16 Ok-1 '40 **R** Bdwy Tower Enid
Shulter, E. H. '02 Ark-1 '29 3rd & Seminole McAlester
Shuller, Thurman '14 Ark-1 '39 **Pd** 3rd & Seminole McAlester
Shuttee, Robert D. '21 Ok-1 '44 Bdwy Tower Enid
Simon, Bill J. '24 Ok-1 '47 Mil Serv
Simon, Floyd '17 Ok-1 '43 Clinton
Simon, John F. '08 Kan-2 '33 Alva
Simon, Ralph '21 Ok-1 '44 Clinton
Simpson, J. D. '24 Tenn-6 '50 Sapulpa
[3]Simpson, N. N. '69 Ky-1 '93 Henryetta
Sinclair, Franklin D. '05 Md-7 '30 **OG** Utica Sq Med Ctr Tulsa
Singleton, Harry E. '21 Ok-1 '46 **I** 1220 N Walker OC
Sippel, Mary Edna '93 Kan-2 '16 Utica Sq Med Ctr Tulsa
Sisler, Frank H. '87 Md-1 '10 Bristow
Sisler, Wade '97 Ill-6 '21 **Or** 807 S Elgin Tulsa
[4]Slagle, Gene W. '22 Ok-1 '47 3892 Greenway Pl Shreveport La
Sleeper, Harold G. '21 Tex-2 '45 **P** Box 6246 OC
Smith, A. B. '00 Ok-1 '32 **S** 408 Main St Stillwater
Smith, Byron '21 Ok-1 '45 **I** 510 NW 12 OC
Smith, Carlton E. '09 Ok-1 '34 Henryetta
Smith, Casper H., Jr. '25 DC-1 '53 815½ Walnut Ave Duncan
Smith, Charles A. '02 Tex-4 '30 **P** Lockett Hotel Norman
Smith, Delbert G. '03 Ok-1 '29 **OG** 1111 N Lee OC
Smith, D. O. '76 Kan-2 '13 **I** 604 S Cinn Tulsa
Smith, Francis E. '21 Ok-1 '50 Kingfisher
Smith, Haskell '09 Ok-1 '34 523 Lewis St Stillwater
Smith, Henry C. '21 Ok-1 '45 Walters
[5]Smith, Joseph G. '70 Mo-32 '03 **Ob** 319 Dewey Ave Bartlesville
Smith, Joseph J. '13 Mo-2 '40 **OG** Shattuck
Smith, Morris '00 Ok-1 '28 Guymon
Smith, Ralph '09 Mo-34 '34 Med Arts Bg OC
Smith, R. O. '03 Ok-1 '32 Hominy
Smith, Ruric N. '87 Pa-2 '15 **OALR** Med Arts Bg Tulsa
Smith, Wendell L. '07 Ok-1 '33 2431 E Admiral Tulsa
Smith, W. H. '25 Ok-1 '47 Lindsay
Smith, W. O. '96 Ok-1 '25 **OALR** Utica Sq Med Ctr Tulsa
Snoddy, Wm. T. '20 Ok-1 '44 **Pa** 601 NW 9 OC
Snow, J. B. '03 Tex-2 '26 **Pd** 625 NW 10 OC
Snow, Otis '06 Ok-1 '49 Ft Supply
[5]Somerville, O. S. '71 Ky-4 '94 **I** 412 E 5 Bartlesville
Souter, John '92 Ok-1 '19 Guthrie
Sowell, H. K. '17 Ok-1 '43 **An** 620 NW 9 OC
Spann, Joe L. '27 Ok-1 '48 **S** Utica Sq Med Ctr Tulsa
Spann, Logan A. '05 Ok-1 '34 Braniff Bg Tulsa
Sparks, Tom C. '21 Tex-12 '45 **S** 301 W Bdwy Ardmore
Spaulding, H. B. '89 Mich-1 '18 Ralston
[3]Speed, H. Kirven '84 Tex-2 '06 Sayre
Spence, Ray E. '22 Ok-1 '46 Pauls Valley
Spence, W. P. '76 Col-5 '05 Sayre
Spencer, Hugh B. '17 Ind-20 '50 **Pd** 2828 E 15 Tulsa
Spickard, L. J. '82 Ky-2 '08 Okemah
Spitzer, Lawrence L. '11 NY-19 '37 **PH** 320 F SW Ardmore
Springer, M. P. '88 O-6 '14 118 E 6 Tulsa
Srigley, R. S. '14 Mass-1 '39 **S** Hollis
Stacy, J. R. '14 O-6 '42 **Or** 411 NW 11 OC
Stanbro, Gregory E. '92 NY-6 '16 **S** 1111 N Lee OC
Standifer, O. C. '96 Ok-1 '24 **S** Elk City
Stanley, Monte V. '93 Ill-22 '17 1632 E 15 Tulsa
Starkey, Wayne '06 Ok-1 '34 **OALR** Altus
Starr, O. W. '90 Mo-34 '14 Drumright
Starry, L. J. '94 Mo-2 '19 **S** 1200 N Walker OC
Steele, Byron W., Jr. '21 Mass-1 '45 **S** Utica Sq Med Ctr Tulsa
Steel, Marcella R. '05 Wis-5 '30 **An** 1356 E 27 Pl Tulsa
Steelman, G. M. '14 Ok-1 '45 Haskell
Steen, Carl T. '82 Ok-1 '14 **P** Box 151 Norman
Stephens, Anthony M., Jr. '14 Tenn-7 '44 Okmulgee
Stephens, E. F. '82 Tenn-9 '07 Security Natl Bg Norman
Stephens, George K. '09 Ark-1 '33 **Pd** Ada
Stephenson, I. F. '06 Ok-1 '29 Alva
[1]Stevens, James Winlock '83 Tenn-6 '09 5611 B S Pa OC
Stevenson, James '93 Ill-11 '17 **D** Med Arts Bg Tulsa
Stewart, H. Boyd '96 O-40 '23 **An** 2500 E 27 Pl Tulsa
Stillwell, Robert J. '96 Ok-1 '29 Am Natl Bg OC
Stokes, E. M. '17 Ga-1 '42 **OG** 1415 E 15 Tulsa
Stokes, Lowell L. '05 Ok-1 '36 1321 S Main Tulsa
Stoll, A. A. '87 Ky-2 '10 **I** Clinton
Stoll, Richard G. '13 O-6 '39 **S** 620 Choctaw Chickasha
Stone, B. E. '23 Ok-1 '52 Anadarko
Stone, S. N., Jr. '08 Pa-7 '32 **S** 528 NW 12 OC
Stough, A. R. '10 Tenn-6 '36 Med Arts Bg McAlester
Stough, Daniel F., Jr. '02 Ok-1 '27 Geary
Stout, Hugh A. '09 Ok-1 '37 **Pa** 1200 N Walker OC
Stout, Marvin E. '85 Ok-1 '10 **S** 209 NW 13 OC
Stowell, Averill '12 Md-7 '38 **NS** 1151 S Peoria Ave Tulsa
Stowers, Aubrey E. '13 Tenn-6 '39 Sentinel
Stratton, Emil F. '18 Tenn-6 '46 **Pd** 443 N 16 Muskogee
Stream, M. M. '24-Ok-1 50 2004 NE 29 OC
[1]Stream, Lawrence '23 Ok-1 '49 **An** 800 NE 13 OC
Strecker, W. E. '09 Ok-1 '36 1104 N Lee OC

[3]Street, O. J. '74 Tenn-11 '00 Gould
Strenge, Henry B. '14 Conn-1 '39 **Pd** 800 NE 13 OC
Strong, C. Riley '20 Ok-1 '43 El Reno
Strong, Paul T. '08 Pa-2 '34 **I** 2020 S Xanthus Tulsa
Stuard, Charles G. '09 Ok-1 '37 **Op** Utica Sq Med Ctr Tulsa
Stuart, Frank A. '04 Tenn-6 '30 **Or** Utica Sq Med Ctr Tulsa
Stuart, Leon H. '87 O-6 '17 **R** Med Arts Bg Tulsa
Stuart, Royal Epps '14 Va-1 '44 Utica Sq Med Ctr Tulsa
Sturgeon, H. Violet '08 Ok-1 '33 Hennessey
Sturm, Robert T. '14 Ok-1 '38 1111 N Lee OC
Sugarman, Milton J. '18 NY-15 '42 **OALR** Elk City
Sugg, Alfred R. '94 Ark-1 '24 **U** Ada
Sukman, Robert '21 Tex-2 '46 **R** 921 NE 13 OC
Sullivan, Clarence B. '97 Ok-1 '22 Carnegie
Sullivan, Elijah E. '86 Mo-28 '10 **U** Med Arts Bg OC
Sullivan, Robert C. '98 Tenn-5 '22 Gilbert Bg Ardmore
Summers, C. S. '90 Ind-20 '19 Daniels Bg Tulsa
Sundgren, Vincel '15 Kan-2 '43 **I** 604 S Cinn Tulsa
Sutliff, Edward H. '90 NY-1 '17 Clinton
Swan, Joseph J. '12 Ok-1 '39 Ok Natl Bk Bg Chickasha
Swanson, K. F. '01 Ia-3 '27 **U** 604 S Cinn Tulsa
Switzer, Fred D. '08 Ok-1 '36 **OALR** 3rd & Seminole McAlester

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Tagge, James Frederick '20 Mo-2 '43 **I** 5 & Cherokee Enid
Tallant, Geo. A. '02 Ok-1 '36 **S** Frederick
Talley, Charles N. '97 Ok-1 '23 Marlow
Talley, E. Evans '05 Ok-1 '34 **S** Bdwy Tower Enid
Taylor, Charles B. '79 DC-2 '05 **U** 418 NE 15 OC
Taylor, Clarence P. '23 Ok-1 '47 **OG** Ada
Taylor, Jim M. '11 Mich-1 '35 **U** 1111 N Lee OC
Taylor, John R. '05 Ok-1 '34 **I** Kingfisher
Taylor, L. C. '13 Ok-1 '38 **An** 620 NW 9 OC
Taylor, Robert L. '14 Ok-1 '42 **I** 807 NW 23 OC
Taylor, R. Z. '84 Tenn-5 '08 Blair
Taylor, Thomas W. '27 Ok-1 '53 915 S Cinn Tulsa
[5]Taylor, Wm. M. '72 NY-10 '98 Rt 4 Box 609C OC
[5]Tedrowe, C. W. '72 Ind-27 '98 Woodward
Tefertiller, C. L. '16 Ok-1 '42 **S** Altus
[5]Templin, O. E. '70 Tenn-5 '05 1240 E 30 Tulsa
Terrill, Robert J. '21 Tex-12 '45 **I** Bdwy Tower Enid
Terry, Jack T. '12 Kan-2 '39 Community Bg Ponca City
Thomas, Denton B. '18 Ok-1 '50 Chelsea
Thomas, Harlan '16 Ark-1 '50 Med Arts Bg Tulsa
Thomas, Wm. F., Jr. '11 La-1 '37 **OG** Utica Sq Med Ctr Tulsa
Thomasson, E. B. '87 Tex-4 '11 **S** 807½ Main Duncan
Thompson, James Barrett '13 Mich-1 '39 **S** Med Arts Bg Tulsa
Thompson, Lawrence E. '24 Ok-1 '52 1918 N Oxford Tulsa
Thompson, M. K. '71 Ga-10 '97 **OALR** Surety Bg Muskogee
Thompson, Oliver H. '15 Tex-2 '40 Ranch Acres Med Ctr Tulsa
Thompson, Wayman J. '04 Ok-1 '29 **G** 1220 N Walker OC
Thompson, Wm. Best '19 Ok-1 '43 **C** 528 NW 12 OC
Thorp, Edward M. '16 Ok-1 '42 Cushing
Threlkeld, Lal D. '15 Ok-1 '40 **Pd** 1220 N Walker OC
[1]Throne, Bert Ennis '20 Ok-1 '50 **OG** 14 E 9 Shawnee
Tisdal, James H. '20 Ok-1 '45 Clinton
Tisdal, W. C. '07 Ok-1 '33 **S** Clinton
Tolbert, J. B. '19 Ok-1 '43 Mountain View
Toma, Paul '17 Tenn-6 '41 2112 NW 12 OC
[5]Tomkins, J. E. '68 Que-1 '94 **S** Yukon
Tomlin, Clyde Edward '18 Ok-1 '45 Emory Univ Hosp Atlanta Ga
Tompkins, R. G. '23 Ill-6 '47 **I** Med Arts Bg Tulsa
Tompkins, S. Fulton '16 Mo-2 '42 **Or** 1111 N Lee OC
Tool, Charles D. '02 Ok-1 '31 **Pa** 921 NE 13 OC
[5]Torrey, J. P. '75 Mass-1 '96 1211 Keeler Ave Bartville
Townsend, Cary W. '79 Mo-34 '07 **G** Med Arts Bg OC
Tracewell, George L. '09 Neb-5 '35 **OALR** Okmulgee
Tracy, Gilbert W. '12 Ok-1 '38 **I** 104 N 16 Muskogee
[5]Trainor, Wm. Joseph '78 Md-4 '03 680 N Walnut Wilmington Ohio
Traverse, C. A. '08 Ok-1 '33 Alva
Trent, Robert I. '07 Va-1 '33 **Op** 1111 N Lee OC
Triplett, T. Burke '85 Ill-20 '12 Mooreland
Trow, T. A. '18 Ok-1 '42 Holdenville
Tullius, Philip G. '18 Ok-1 '42 1200 N Walker OC
Tulloch, Geo. M. '15 Ky-2 '40 Med Cter Bartlesville
Turnbow, W. R. '08 Ok-1 '35 3015 E 15 Tulsa
Turnbull, Theodore '19 Ill-6 '45 **I** 222 E 5 Tulsa
Turner, Henry H. '92 Ky-2 '21 **I** 1200 N Walker OC
Turner, Samuel R. '21 Ill-6 '51 **An** 1419 E 15 Tulsa
Turner, Thomas R. '17 Tex-4 '41 **PN** 604 S Cinn Tulsa
Tuttle, Howard D. '23 Ok-1 '51 Wagoner
Tyler, Joe E. '17 Tenn-5 '42 **P** 604 S Cinn Tulsa

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Underwood, David J. '98 Ill-6 '25 **Pd** Utica Sq Med Ctr Tulsa
Underwood, F. L. '86 Ga-11 '10 **I** Med Arts Bg Tulsa
Ungerman, A. H. '09 Ok-1 '34 **PN** Med Arts Bg Tulsa
Ungerman, Milford S. '19 Ok-1 '45 **PN** Med Arts Bg Tulsa

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Vammen, Adolph N. '19 Ok-1 '44 **OG** 1415 E 15 Tulsa
Vandever, H. F. '84 Mo-20 '07 **OALR** 1st Natl Bg Enid
Vandever, Harry Wallace '25 Tenn-6 '48 Mil Serv
Vansant, J. P. '89 Ga-5 '15 Dewey
Varian, Thelma S. '19 Col-2 '44 1603 E. Okmulgee Muskogee
Veazey, J. H. '01 Tex-2 '26 **I** 921 14 NW Ardmore
Veazey, Lyman C. '04 Tex-2 '32 Little Bg Ardmore
Vickers, Paul M. '11 Minn-4 '36 **Pr** 528 NW 12 OC
Vieregg, F. R. '93 Kan-2 '18 **OALR** Clinton
Vint, William A. '21 Ok-1 '52 Vinita
Vloedman, Derk A. '99 Ill-43 '24 **S** Woodward
Von Wedel, Curt '85 NY-19 '07 **PL** 610 NW 9 OC

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Wade, Glen F. '03 Ok-1 '44 1111 N Lee OC
Wadsworth, R. M. '00 Ok-1 '42 **Pd** 1443 S Quaker Tulsa
Waggoner, Roy E. '85 Mo-34 '09 **OG** 115½ W 7 Stillwater
Wagner, J. C. '93 Ok-1 '19 **Ob** Masonic Bg Ponca City
Wails, T. G. '95 Ok-1 '21 **OALR** Med Arts Bg OC

Wainwright, Tom L. '09 Ok-1 '33 **S** Mangum
Waldrop, Wm. '14 Ok-1 '42 **Or** 605 NW 10 OC
Walker, A. A. '98 Ok-1 '24 Wewoka
Walker, C. F. '75 Mo-34 '02 Grove
Walker, Dean C. '19 NY-1 '44 **I** 604 S Cinn Tulsa
Walker, Ethan A. '19 Ok-1 '43 **ALR** Yukon
Walker, Ethel M. '09 Cal-12 '36 **OG** 300½ W Main Ardmore
Walker, G. I. '94 Tenn-5 '16 Hominy
[5]Walker, I. D. '77 Tenn-1 '02 **OALR** Tonkawa
Walker, J. Robert '07 Ok-1 '43 **An** 620 NW 9 OC
[5]Walktr, Roscoe '85 NY-1 '11 2521 E 34 Tulsa
Walker, Wm. A. '92 Ok-1 '27 1215 S Utica Tulsa
Walker, W. K. '09 Tex-4 '36 Marlow
Wallace, Albert W. '01 O-6 '28 **I** 604 S Cinn Tulsa
Wallace, Virgil W. '09 Ok-1 '43 **OG** 1529 Gore Blv Lawton
Wallingford, F. C. '21 Kan-2 '44 Mil Serv
[5]Waltrip, J. R. '89 Ok-1 '13 Rt 2 Box 33F Greenwood La
Wappler, Frank Alvin '19 Tex-2 '51 **An** 2010 S Utica Tulsa
Ward, Benjamin W. '02 La-1 '25 **S** 1916 S Utica Tulsa
Waterbury, Ray '21 Ok-1 '45 Apache
Waters, Claude B. '07 Ok-1 '34 Pawnee
Waters, Floyd L. '08 Ok-1 '34 Hugo
Waters, Williams A. '12 Ok-1 '47 6622 E King Tulsa
[5]Watkins, B. H. '89 Mo-34 '16 1025 Douglas Las Vegas N Mex
Watson, O. Alton '06 Ok-1 '26 **OALR** 1200 N Walker OC
Watts, Maurice A. '18 Pa-13 '51 Tonkawa
Weaver, Wm. N. '08 La-1 '32 **I** Barnes Bg Muskogee
Webb, J. Warner, Jr. '11 Ia-3 '40 **Ind** Med Dpt Am Airlines Tulsa
Weber, A. G. '87 Ill-6 '21 Goltry
Weber, Fred W. '22 Ok-1 '51 PO Bg Midwest City
Weber, Roxie A. '94 Md-7 '21 Okla A & M Infirmary Stillwater
Weedn, Alton J. '07 Ok-1 '35 **S** 117 N 10 Duncan
Welborn, O. E. '89 Tex-4 '15 Ada
Welborn, Orange M. '23 Ok-1 '46 Ada
Wells, Eva '82 Ok-1 '10 **Pd** Med Arts Bg OC
Wells, Lois L. '94 Tenn-5 '35 **An** Box 493 DeBary Fla
Wells, Thomas '96 Neb-5 '28 Union Natl Bk Bg Bartlesville
Wendel, Wm. E. '14 Kan-2 '40 Eufaula
Wendelken, Harold W. '14 Mich-1 '40 **I** Miami
Wenger T. R. '25 Ok-1 '49 **An** 800 NE 13 OC
Werling, E. H. '06 Mo-2 '30 **S** Pryor
West, Kelly M. '25 Ok-1 '48 **I** 1200 N Walker OC
West, W. K. '90 Ok-1 '15 **Or** 1200 N Walker OC
[1]Westbrook, Brock Rogers '21 Ok-1 '46 **OG** Union Natl Bg Bartlesville
[5]Westfall, L. M. '80 Pa-1 '05 **ALR** 1502 Wilshire Blv OC
[5]Wharton, J. L. '73 Tenn-8 '04 Sulphur
Wheeler, H. C. '12 Ok-1 '38 **An** 3rd & Seminole McAlester
Wheeler, J. L. '21 Ok-1 '52 Texhoma
White, Charles Ed '93 Tenn-6 '25 **OG** 526 N 6 Muskogee
White, Eric M. '09 Ok-1 '36 Med Arts Bg Tulsa
White, Harold A. '15 La-1 '41 **S** Med Arts Bg Tulsa
White, James W. '16 Tenn-6 '43 **Pd** 3102 S Harvard Tulsa
[3]White, J. Hutchings '73 Va-1 '96 Surety Bg Muskogee
White, L. M. '25 Ok-1 '48 Security Bg Lawton
White, M. S. '97 Ky-2 '24 **Ind** Blackwell
White, N. S. '96 Ok-1 '20 **S** Med Arts Bg Tulsa
White, Oscar '93 Ill-6 '23 **S** 1200 N Walker OC
White, Phil E. '00 Tenn-6 '29 **Ind** 318 NW 13 OC
Whitely, Seals L., Jr. '20 Ok-1 '49 Durant
Whiteneck, Rhonald A. '17 Ok-1 '43 Wayncka
Whitney, M. L. '08 Kan-2 '35 **U** Okemah
Wicker, Donald E. '25 Tenn-6 '49 605 Gore Blv Lawton
Wicker, Walter, Jr. '19 Ark-1 '43 605 Gore Blv Lawton
Wickham, M. M. '85 Ok-1 '26 **D** 716 W Symmes Norman
Wiggins, Carryl W. '00 Neb-5 25 **Pu** 921 NE 13 OC
Wight, Avery B. '16 Neb-6 '40 **S** Bass Bg Enid
Wilbanks, Chas. E. '22 Ok-1 '50 727 N Lewis Tulsa
Wildman, S. F. '92 Ok-1 '24 **U** Med Arts Bg OC
Wiley, A. Ray '90 Ok-1 '13 **S** Med Arts Bg Tulsa
Wiley, George A. '04 Ill-6 '33 **Op** 202½ E Main Norman
Wilhite, L. R. '95 Ok-1 '16 **I** Perkins
Wilkins, Harry '04 Ok-1 '27 **NS** 525 NW 11 OC
Willard, D. G. '01 Ok-1 '29 231 S Peters Norman
Williams, Alpha McAdams '93 Ok-1 '21 Petroleum Bg Shawnee
Williams, Byron E. '06 Kan-2 '34 525 NW 11 OC
Williams, C. E. '92 Mo-43 '21 **OALR** Woodward
Williams, Claude H. '19 Ok-1 '50 Okeene
[5]Williams, C. O. '82 Tenn-5 '07 13½ E Choctaw McAlester
Williams, Gordon D. '01 Ok-1 '27 Weatherford
[5]Williams, J. Clay '84 Ky-11 '08 Durant
Williams, John W. '23 Tenn-5 '47 **OG** Bdwy Tower Enid
Williams, Leonard C. '97 Ok-1 '20 **S** 1200 N Walker OC
Williams, N. K. '91 Mo-7 '17 McCurtain
[5]Williams, R. W. '78 Ill-1 '06 Evergreen Col
Williams, Richard G. '25 Ok-1 '53 1645 E 15 Tulsa
Williams, Theo S. '11 Ok-1 '38 Med Arts Bg Tulsa
Williams, Woodrow W. '12 Tex-4 '37 Idabel
[3]Willour, L. S. '80 Pa-11 '01 **S** 3rd & Seminole McAlester
Wilner, Sol '13 Md-1 '39 **R** Med Arts Bg Tulsa
Wilson, Charles H. '11 Ok-1 '37 **S** Med Arts Bg OC
Wilson, Douglas E. '23 Ok-1 '47 **Or** 1202 Arlington Lawton
Wilson, George S. '95 Mo-2 '27 **OALR** 617 S Quincy Enid
Wilson, Herbert A. '95 Ark-1 '29 Box 18 McAlester
Winn, George L. '19 Ok-1 '43 **Al** 711 NW 10 OC
Winningham, Elbert V. '07 Ok-1 '49 **R** 2540 NW 25 OC
Witcher, Edward K. '91 Ill-6 '21 **P** Vinita
Witcher, R. B. '99 Ill-6 '25 Med Arts Bg Tulsa
Witt, Richard E. '17 Ok-1 '41 **S** V A Hosp Muskogee
Witten, H. B. '07 Ok-1 '36 **PN** 921 NE 13 OC
Wolever, LeRoy A. '21 Ok-1 '50 328 E Aeronca Midwest City
Wolf, Stewart G., Jr., '14 Md-7 '38 800 NE 13 OC
Wolfe, Henry D. '17 Tenn-6 '41 Hugo
Wolfe, I. C. '95 Tex-4 '23 426 N 6 Muskogee
Wolff, Eugene G. '01 Ok-1 '34 **An** 2010 S Utica Tulsa
Wolff, J. Powers '97 Ok-1 '27 **S** 1220 N Walker OC
[5]Wolff, L. G. '68 Mo-1 '99 **Ob** Okarche
Wolohon, H. C. '13 Cal-12 '37 3328 Classen Blv OC
Womack, G. J. '25 Ok-1 '52 Heavener
Wood, Jack A. '24 Ark-1 '47 Mil Serv
Wood, J. D. '21 Ark-1 '44 Seminole

Wood, J. Guild '01 Cal-12 '25 **S** Weatherford
Wood, James L. '84 Mo-28 '06 Eufaula
Wood, W. M. '09 Col-2 '35 Barnes Bg Muskogee
Woodard, Clayton E. '21 Ark-1 '49 Drumright
Woodburn, J. Tinder '02 Mo-2 '28 **OALR** Barnes Bg Muskogee
Woods, Lewis E. '92 Ok-1 '26 **I** Petroleum Bg Chickasha
Woodson, Earl M. '97 La-1 '22 Poteau
Woodson, Fred E. '96 Ok-1 '31 **An** Med Arts Bg Tulsa
Woodson, O. M. '07 Ok-1 '33 231 S Peters Norman
Woodward, Neil W. '98 Ok-1 '29 **Pr** 631 NW 10 OC
[4]Wooldridge, B. F. '24 Tenn-5 '47 Altus
Word, Lee B. '04 Ark-1 '30 420 E 2 Bartlesville
Wormington, F. L. '75 Mo-20 '00 Miami
[5]Worten, Divonis '70 Tenn-1 '02 Pawhuska
[4]Wright, Harper, Jr. '24 Tenn-5 '47 Louisville Hosp Louisville Ky
[4]Wright, Kenneth L. '23 La-1 '47 Ochsner Clinic New Orleans La
Wright, R. L. '81 Ill-11 '08 Poteau
Wright, W. T. '17 Ok-1 '50 Jay
Wynn, Noble F. '18 Ok-1 '42 Edmond
Wyrick, Richard '25 Ok-1 '49 **Op** Med Arts Bg OC

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Yagol, H. B. '10 Ga-5 '34 **R** Ada
Yandell, Hays R. '07 Mass-1 '33 **S** 2020 S Xanthus Tulsa
[3]Yeargan, W. M. '77 Ark-1 '10 Hollis
Yeary, Edwin C. '16 Ok-1 '39 Community Bg Ponca City
Yeary, G. H. '05 Ok-1 '29 Newkirk
York, J. F. '07 Tex-2 '31 Madill
Young, A. M., III '13 Ok-1 '37 **U** 528 NW 12 OC
Young, C. Jack '23 Ok-1 '47 **D** 1200 N Walker OC
Young, Clarence C. '05 Tenn-6 '32 **S** 225 N Bell Shawnee
Young, Edgar W., Jr. '21 Ok-1 '47 **I** 511 NW 11 OC

—Z—

[1]Zumwalt, Robert B. '27 Ok-1 '53 Tecumseh

Oklahoma State Medical Association

Roster By Counties

as of December 31, 1954

Adair County

Emmott, R. C. — Stilwell
Green, B. F. — Stilwell
Manning, Robert D. — Westville

Alfalfa County

Benson, Charles L. — Cherokee
Blender, John X. — Cherokee
Dougan, A. L. — Carmen
Hale, Forrest — Cherokee
Hart, George A. — Cherokee
Morgan, N. L. — Cherokee
Weber, A. G. — Goltry
(Member Garfield-Kingfisher)

Atoka County

Fina, A. C. — Atoka
Rahhal, George M. — Atoka
(Member Pittsburg)

Beaver County

Calhoon, Ed L. — Beaver
(Member Woods)
McGrew, E. A. — Beaver

Beckham County

Andreskowski, W. T. — Elk City
(Member Jefferson)
Baker, L. V. — Elk City
Devanney, Phil J. — Sayre
Evans, Leo R. — Sayre
Featherston, Wm. M. — Elk City
Heine, Ralph R. — Elk City
Husband, William G. — Elk City
Kilpatrick, E. S. — Elk City
Leebron, Wm. M. — Elk City
Lehman, Donald S. — Elk City
Mabry, William L. — 4201 Pine Texarkana, Tex
Mathis, James L. — Elk City
McGrath, T. J. — Sayre
Meiers, Robert Lee — V A Hosp Topeka, Kan.
Shadid, Alexander — Elk City
Speed, H. Kirven — Sayre
Spence, W. P. — Sayre
Standifer, O. C. — Elk City
Sugarman, Milton J. — Elk City

Blaine County

Anderson, H. R. — Watonga
Bohlman, W. F. — Watonga
Cox, A. K. — Watonga
Curtin, Virginia — Watonga
DeJarnette, John F., Jr. — Military Service
Godfrey, Kenneth E. — Okeene
Milligan, E. F. — Geary
Perry, Fred T. — Watonga
Rogers, C. L. — Canton
Stough, Daniel F., Jr. — Geary
Williams, Claude H. — Okeene

Bryan County

Baker, A. T. — Durant
Cochran, Roy L. — Caddo
Coker, B. B. — Durant
Colwick, James T., Jr. — Durant
Colwick, J. T. — Durant
Engles, Leroy L. — Military Service

Haynie, W. K. — Durant
Hyde, W. A. — Durant
McCalib, D. C. — Colbert
Moore, Charles F. — Durant
Sawyer, R. E. — Durant
Whitely, Seals L., Jr. — Durant
Williams, J. Clay — Durant

Coddo County

Cook, Edward T., Jr. — Anadarko
Dixon, W. L. — Cement
Haslam, G. E. — Anadarko
Hawn, W. T. — Binger
Henke, J. R. — Hydro
Kerley, W. W. — Anadarko
Mayes, R. H. — Anadarko
McClure, P. L. — Ft. Cobb
Miles, J. B. — Anadarko
Minor, S. W. — Hinton
Stone, B. E. — Anadarko
Sullivan, Clarence B. — Carnegie
Waterbury, C. Ray — Apache
Williams, R. W. — Evergreen, Colo.

Conodion County

Catto, W. B. — El Reno
Dorrough, Joe — El Reno
(Member Pittsburg)
Enos, Jack P. — Yukon
Goldberger, J. H. — El Reno
Goodman, George L. — Yukon
Hake, Orin J. — El Reno
Herod, Philip F. — El Reno
Hollingsworth, Francis W. — El Reno
Jobe, James P. — El Reno
Johnson, Alpha Louis — El Reno
Lawton, W. P. — El Reno
Mogab, John H. — El Reno
Myers, Jack W. — El Reno
Neumann, Milton A. — Okarche
Ottis, Paul J. — Okarche
Phelps, Joseph T. — El Reno
Phelps, Malcom E. — El Reno
Richardson, D. P. — Union City
Riley, James T. — El Reno
Strong, C. Riley — El Reno
Tomkins, J. E. — Yukon
Walker, Ethan A. — Yukon
Wolff, L. G. — Okarche

Corter County

Barker, E. R. — Healdton
Cantrell, D. E., Jr. — Healdton
Carlock, J. Hoyle — Gilbert Bg Ardmore
Cox, J. L. — 101½ West Main Ardmore
Cunningham, C. D. — Gilbert Bg Ardmore
Dickinson, W. Paul — Luxora, Ark.
Godfrey, James T. — Gilbert Bg Ardmore
Gordon, J. M. — Gilbert Bg Ardmore
Graybill, Ray B. — 130 C St Ardmore
Harris, Forest D. — 301 W Bdwy Ardmore
Hathaway, W. G. — Lone Grove
Horne, Malcolm — Little Bg Ardmore
Kell, Thornton — 208 W Bdwy Ardmore
Long, Loyd L., Jr. — 921 14 NW Ardmore
Lorentzen, Clifford L. — 301 W Bdwy Ardmore
Mote, W. R. — 208 W Bdwy Ardmore
Moxley, Joe N. — 825 W Bdwy Ardmore
Murphy, Ralph W. — Military Service
Pollock, John R., Jr. — 825 W Bdwy Ardmore
Reid, Roger J. — 212 First SW Ardmore
Ryan, Henry G. — Healdton
Sparks, Tom C. — 301 W Bdwy Ardmore
Spitzer, Lawrence L. — 320 F SW Ardmore
Sullivan, Robert Cecil — Gilbert Bg Ardmore
Tomlin, Clyde Edward Emory Univ Hosp Atlanta, Ga.
Veazey, J. H. — 921 14 NW Ardmore
Veazey, Lyman C. — Little Bg Ardmore
Walker, Ethel M. — 300½ W Main Ardmore

Cherokee County

Allison, John S. — Tahlequah
Buffington, G. W. — Tahlequah
Canada, Joseph C. — Military Service
Coin, James W., Jr. — Tahlequah
Galloway, Nova L. — Tahlequah
Hines, S. J. T. — Tahlequah
Masters, Herbert A. — Tahlequah
McIntosh, R. K., Jr. — Tahlequah
Medearis, P. H. — Tahlequah

Choctow County

Fleming, Elizabeth P. — Hugo
Gee, Robert L. — Hugo
Johnson, Edgar A. — Hugo
LaCroix, Julius A., Jr. — Hugo
Waters, Floyd L. — Hugo
Wolfe, Henry D. — Hugo

Cimorron County

Bayless, James M. — Military Service
Dietrich, Bailey Leon — Boise City
Hallford, J. C. — Boise City
Merkley, George E., Jr. — Boise City

Clevelond County

Arthur, Mary E. — Student Health Serv Norman
Atkins, W. H. — 821 Brooks Norman
Bealor, John A. — Central State Hosp Norman
Behrman, James Milton — Central State Hosp Norman
Berry, Curtis — 231 S. Peters Norman
Buffington, F. C. — 502 S Crawford Norman
Donaghe, Roy W. — 119 S Santa Fe Norman
(Member of Comanche-Cotton)
Fox, William W. — 230½ E Main Norman
Gillespie, C. P. — Central State Hosp Norman
Gregg, O. R. — 101 E Eufaula Norman
Hackler, H. W. — Central State Hosp Norman
Haddock, J. L. — 231 E Gray Norman
Haddock, Phil — 231 E Gray Norman
Hinshaw, J. R. — 220 S Flood Norman
Hood, James O. — Student Health Serv Norman
Howell, O. E. — Norman
Kleinschmidt, George Wilbert — Central State Hosp Norman
Lambert, J. B. — Lexington
Mayfield, Robert Charles — 216 E Eufaula Norman
Mayfield, Warren T. — Mountainberg, Ark.
Mechling, Geo. S. — Central State Hosp Norman
Merritt, Iva S. — 650 Lindsay Rd Norman
Mitchell, Clarence — Student Health Serv Norman
Monfort, M. F. — Central State Hosp Norman
(Member Woods)
Nicholson, J. L. — Student Health Serv Norman
Nielsen, Gertrude — 310 S Univ Blv Norman
O'Leary, D. W. — 518 N Park Norman
Patten, Wm. Robert — 502 S Crawford Norman

Ragan, Tillman A. 619 W Boyd Norman
Reichert, R. J. 412 W Hayes Norman
Robinson, Donald F. Student Health Serv Norman
Ryan, Robert O. 209 S Crawford Norman
Shead, William L. 311 W Main Norman
Smith, Charles A. Lockett Hotel Norman
Steen, Carl T. Box 151 Norman
Stephens, E. F. Security Natl Bk Bg Norman
Wickham, M. M. 716 W Symmes Norman
Wiley, George A. 202½ E Main Norman
Willard, D. G. 231 S Peters Norman
Woodson, O. M. 231 S Peters Norman

Coal County

Byrd, Wallace Coalgate
(Member Pontotoc)

Comanche County

Angus, Donald A. 614 C St Lawton
Angus, Haney A. 614 C St Lawton
Angus, Howard 614 C St Lawton
Austin, Frank H. 1202 Arlington Lawton
Aycock, Byron W. 1002 Gore Blv Lawton
Barber, George Stanley 409 A Ave Lawton
Bushart, James H. 1208 Arlington Lawton
Caldwell, Avalo V. Security Bk Bg Lawton
Cole, W. C. 605 Gore Blv Lawton
Dennis, Robert P. 1002 Gore Blv Lawton
Downing, G. G. 605 Gore Blv Lawton
Dunlap, Ernest B. 513 C Ave Lawton
Ferguson, Lawrence W. 509 E St Lawton
Fox, Fred T. 605 Gore Blv Lawton
Graybill, Charles S. 1202 Arlington Lawton
Green, Charles E. 1202 Arlington Lawton
Hamm, Leslie T. 1202 Arlington Lawton
Hicks, J. T. 605 Gore Blv Lawton
Howard, Herbert 605 Gore Blv Lawton
Joyce, Charles W. Fletcher
Lewis, W. F. 605 Gore Blv Lawton
Martin, C. M. Elgin
Matthey, Wm. A. Med Dental Bg Lawton
Means, Royce B. 1202 Arlington Lawton
Meek, Milton P. 1202 Arlington Lawton
Mitchell, J. N. Security Bk Bg Lawton
Myers, David A. 1250 Jones St San Francisco, Cal.
Nichol, Byron A. Washington 12, D.C.
Parker, James Wm. 801 Pershing Dr Lawton
Parsons, O. L. 511 E Ave Lawton
Wallace, Virgil W. 1529 Gore Blv Lawton
White, L. M. Security Bk Bg Lawton
Wicker, Donald E. 605 Gore Blv Lawton
Wicker, Walter, Jr. 605 Gore Blv Lawton
Wilson, Douglas E. 1202 Arlington Lawton
(Member Tulsa)

Cotton County

Scism, Mollie F. J. Walters
Smith, Henry C. Walters

Craig County

Adams, F. M. Vinita
Bradshaw, John O. Welch
Darrough, J. B. Vinita
Eddington, Allen B. Vinita
Hays, P. L. Vinita
Lane, Kenneth S. Vinita
Marks, W. R. Vinita
McMillan, James Moughan Vinita
Olson, Donald H. Vinita
Vint, William A. Vinita
Witcher, Edward K. Vinita

Creek County

Bakken, Richard L. Bristow
Burnett, Thomas D. Sapulpa
Cale, Walter Sapulpa
Coppedge, O. C. Bristow
Coppedge, Oscar S. Depew
Curry, J. F. Sapulpa
Hindman, William M. Detroit, Mich.
Hollis, J. E. Bristow
Joseph, Philip G. Sapulpa
Kent, Charles T., Jr. Bristow
King, E. W. Bristow
Lewis, P. K. Sapulpa
Loescher, Thomas M. Sapulpa
Martin, Louis A. Sapulpa
McAllister, D. L. Bristow
Mote, Paul Sapulpa
Norfleet, Edward K. Sapulpa
Oakes, C. G. Sapulpa
Rentfrow, J. W. Bristow
Reynolds, S. W. Drumright
Schmidt, Loraine Sapulpa
Simpson, J. D. Sapulpa
Sisler, Frank H. Bristow
Starr, O. W. Drumright
Woodard, Clayton E. Drumright

Custer County

Alexander, C. J. Clinton
Brundage, Bert T. Thomas
Cunningham, C. B. Clinton
Deputy, Ross Clinton
Dewberry, Glenn P. Clinton
Lain, W. B. Clinton
Lamb, Ellis Clinton
Lingenfelter, Paul B. Clinton
Loyd, Edward M. 305 Lake Dr Harlingen, Tex.
McGolrick, Jack B. Military Service
Redus, Lonnie C. Weatherford
Rogers, McLain Clinton
Simon, Floyd Clinton
Simon, Ralph Clinton
Stoll, A. A. Clinton
Sutliff, Edward H. Clinton
Tisdal, James H. Clinton
Tisdal, W. C. Clinton
Vieregg, F. R. Clinton
Williams, Gordon D. Weatherford
Wood, J. Guild Weatherford

Delaware County

Walker, C. F. Grove
(Member Ottawa-Craig)
Wright, W. T. Jay
(Member Ottawa-Craig)

Dewey County

Seba, W. E. Leedey
(Member Beckham)

Ellis County

Burgtorf, Richard H. Shattuck
Dersch, Walter H., Jr. Shattuck
Newman, Floyd Shattuck
Newman, M. Haskell Shattuck
Newman, Roy Shattuck
Smith, Joseph J. Shattuck

Garfield County

Baker, Roscoe C. 1223 W Maine Enid
Bank, Edward W. Bdwy Tower Enid
Bitting, B. T. 1721 W Maine Enid
Buvinger, Wilson J. Bdwy Tower Enid
Chambers, E. Evans 617 S Quincy Enid
Champlin, Paul B. 431 E Cherokee Enid
Cordonnier, Byron, Jr. Bwy Tower Enid
Curry, Dale Wayne 1101 E Bdwy Enid
Dougan, A. F. Bdwy Tower Enid
Duffy, Francis M. 211 W Maple Enid
Hall, R. L. Bass Bg Enid
Hamble, V. R. 802 W York Enid
Harris, D. S. Drummond
Herlihy, Robert M. Bdwy Tower Enid
Hinson, Bruce R. 330 S Fifth Enid
Holcomb, Mark D. Bdwy Tower Enid
Hopkins, P. W. Bdwy Tower Enid
Hudson, F. A. 617 S Quincy Enid
Hudson, Frederick G. 617 S. Quincy Enid
Hudson, Harry H. 617 S Quincy Enid
Hyer, J. V. Garber
Jacobs, Raymond G. 310 S Fifth Enid
Kirby, L. R. Bdwy Tower Enid
Mathews, Hugh Howard Bdwy Tower Enid
McIntyre, John A. Bdwy Tower Enid
Mercer, J. Wendall First Natl Bg Enid
Merrifield, Fred R. 617 S Quincy Enid
Neilson, W. P. Bdwy Tower Enid
Newell, W. B.. Jr. 230 S Fifth Enid
Newell, W. B., Sr. Bdwy Tower Enid
Pearson, Ernest B. 1705 E Bdwy Enid
Rempel, Paul H. Bdwy Tower Enid
Rhodes, Wm. H. 1714 W Oklahoma Enid
Roberts, Charles J. 617 S Quincy Enid
Robinson, E. M. 1101 E Bdwy Enid
Robinson, Earl W. 617 S Quincy Enid
Robinson, Lillian H. 617 S Quincy Enid
Rollins, James H. Univ Hosp Graz, Austria
Ross, George T. 1101 E Bdwy Enid
Ross, Hope S. 1101 E Bdwy Enid
Russell, Henry T. 502 S Lincoln Enid
Shanks, Edwin Patrick 617 S Quincy Enid
Sheets, Marion E. 310 S Fifth Enid
Shields, Herbert B. Bdwy Tower Enid
Shryock, Leland F. Bdwy Tower Enid
Shuttee, Robert D. Bdwy Tower Enid
Tagge, James F. 5 & Cherokee Enid
Talley, E. Evans Bdwy Tower Enid
Terrill, Robert J. Bdwy Tower Enid
Vandever, H. F. First Natl Bg Enid
Vandever, Harry W. Military Service
Wight, Avery B. Bass Bg Enid
Williams, John W. Bdwy Tower Enid
Wilson, George S. 617 S Quincy Enid

Garvin County

Beck, Charles Edward Lindsay
Byrd, James N., Jr. Pauls Valley
Graham, J. A. Pauls Valley
Lindsey, Ray H. Pauls Valley
Monroe, Hugh H. Pauls Valley
Moore, John M. Pauls Valley
Robberson, Morton E. Wynnewood
Shi, Augustin H. Stratford
Shirley, Edward T. Wynnewood
Smith, W. H. Lindsay
Spence, Ray E. Pauls Valley
Waltrip, J. R. Rt 2 Box 33F Greenwood, La.

Grady County

Baze, Walter J. Ok Natl Bk Bg Chickasha
Bonnell, W. L. 116½ N 4 Chickasha
Boon, U. C. Petroleum Bg Chickasha
Chatham, Beverly C. 620 Choctaw Chickasha
Chumley, C. P. Box 227 Chickasha
(Member Muskogee)
Click, William C. 620 Choctaw Chickasha
Coates, R. R. Ok Natl Bk Bg Chickasha
Cook, W. H. 1002 S 8 Chickasha
Davis, Wesley W. Ok Natl Bk Bg Chickasha
Downey, D. S. 1227 Kansas Chickasha
Foertsch, J. H. 620 Choctaw Chickasha
Gyles, Wm. T. Rush Springs
Hairston, Richard M. 917 S First Chickasha
Hennings, A. E. Tuttle
Henton, Rossler Rush Springs
Herndon, Robert Eugent 620 Choctaw Chickasha
Hoyt, Arthur W. 1401 Buchanan St Topeka, Kan.
Little, A. C. Minco
Macumber, H. H. 620 Choctaw Chickasha
Mason, Rebecca H. O.C.W. Chickasha
McClure, H. M. 620 Choctaw Chickasha
McDougal, B. B. Petroleum Bg Chickasha
McVey, G. M. Verden
Renegar, J. F. Tuttle
Revere, S. D. 620 Choctaw Chickasha
Shelby, Richard D. 620 Choctaw Chickasha
Stoll, Richard G. 620 Choctaw Chickasha
Swan, Joseph J. Ok Natl Bk Bg Chickasha
Woods, Lewis E. Petroleum Bg Chickasha

Grant County

Choice, R. W. Wakita
Robinson, F. P. Pond Creek

Greer County

Baker, Charles E. Granite
Fried, David Mangum
Hollis, J. B. Mangum
Pierson, Dwight D. Mangum
Poer, E. M. Mangum
Sellers, Fred W. Mangum
Wainwright, Tom L. Mangum

Harmon County

Lynch, R. H. Hollis
(Member Greer)
Srigley, R. S. Hollis
(Member Jackson)
Street, O. J. Gould
(Member Jackson)
Yeargan, W. M. Hollis
(Member Jackson)

Harper County

Camp, Earl Buffalo

Haskell County

Carson, William S. Keota
Williams, N. K. McCurtain

Hughes County

Bloss, Claude M., Jr. Holdenville
Cramblett, D. H. Holdenville
George, L. J. Stuart
(Member Pittsburg)
Hamilton, S. H. Calvin
Hicks, C. A. Holdenville
Johnson, L. A. S. Holdenville
Kernek, Clyde 614 N 31 Corvalls, Ore.

Kernek, Paul ---------- Holdenville
Schaff, Hartzell V. ---------- Holdenville
Shaw, George W. ---------- Holdenville
Slagle, Gene Watts -- 3892 Greenway Pl Shreveport, La.
Trow, T. A. ---------- Holdenville

Jackson County

Abernethy, E. A. ---------- Altus
Abernethy, J. H. ---------- Altus
Allgood, E. J. ---------- Altus
Allgood, J. M. ---------- Altus
Asher, James O. ---------- Military Service
Becker, Fred W. ---------- Altus
Berry, Thomas M. ---------- Eldorado
Bussey, H. N. ---------- Altus
Crow, Emory S. ---------- Olustee
Holman, James ---------- Altus
Holt, Willard D. ---------- Altus
Irby, J. P. ---------- Altus
Mabry, E. W. ---------- Altus
McConnell, L. H. ---------- Altus
Mollison, Malcolm ---------- Altus
Starkey, Wayne ---------- Altus
Taylor, R. Z. ---------- Blair
Tefertiller, C. L. ---------- Altus
Wooldridge, B. F. ---------- Altus

Jefferson County

Abelarde, Jose F. ---------- Waurika
Collins, D. B. ---------- Waurika
Hagg, O. J. ---------- Waurika
Heflin, W. A. ---------- Ryan
Jacob, John B. ---------- Military Service
Kouri, Phillip ---------- Military Service
Pullen, Lee ---------- Waurika
Rosier, Harold A. ---------- Waurika

Johnston County

Bell, Eugene S. ---------- Tishomingo
(Member Pontotoc)

Koy County

Alexander, Jack ---------- 115 Patton Dr Ponca City
Armstrong, W. O. ---------- Continental Oil Co Ponca City
Arrendell, C. W. ---------- 115 Patton Dr Ponca City
Arrendell, Cad Walder ------
------ Ochsner Clinic New Orleans, La.
Arrendell, Eugene H. ---------- 115 Patton Dr Ponca City
Barrett, Harle Virgil ---------- P.O. Box 1959 Ponca City
Becker, L. H. ---------- Blackwell
Bush, J. M. ---------- Community Bg Ponca City
Clift, Merl ---------- Blackwell
Dugan, Robert R. ---------- 718 Monument Rd Ponca City
Gardner, Charles Campbell -- 516 E Grand Ponca City
Ghormley, J. G. ---------- Blackwell
Ghormley, L. W. ---------- Blackwell
Gibson, R. B. ---------- 215 N 3rd Ponca City
Gibson, Robert W. ---------- Military Service
Gilbert, John Berry ---------- 1115 S 6 Ponca City
Glasscock, T. C. ---------- Community Bg Ponca City
Gowey, H. O. ---------- Newkirk
Howe, J. Holland ---------- 310 N 7 Ponca City
Jones, Harold H., Jr. ---------- 105 N First Ponca City
Kinsinger, R. R. ---------- Blackwell
Kreger, Glenn S. ---------- Tonkawa
Kreger, J. Russell ---------- Tonkawa
MacKercher, Peter A. ---------- Community Bg Ponca City
Mall, W. W. ---------- Community Bg Ponca City
Mathews, Dewey Lee ---------- Tonkawa
McElroy, Thomas ---------- Community Bg Ponca City
Merrifield, Vernon C. ---------- 215 S 4th Ponca City
Mohler, E. C. ---------- Community Bg Ponca City
Murphree, J. ---------- 617 E Brookfield Ponca City
Neal, Laile G. ---------- Community Bg Ponca City
Nieman, G. H. ---------- 417 S 8th Ponca City
Northcutt, C. E. ---------- Masonic Bg Ponca City
Nuckols, A. S. ---------- Community Bg Ponca City
Powell, P. T. ---------- Community Bg Ponca City
Risser, A. S. ---------- Blackwell
Terry, Jack T. ---------- Community Bg Ponca City
Wagner, J. C. ---------- Masonic Bg Ponca City
Walker, I. D. ---------- Tonkawa
Watts, Maurice A. ---------- Tonkawa
White, M. S. ---------- Blackwell
Yeary, Edwin C. ---------- Community Bg Ponca City
Yeary, G. H. ---------- Newkirk

Kingfisher County

Dixon, Ambrose ---------- Hennessey
Hodgson, C. M. ---------- Kingfisher
Lattimore, Frank Cornwell ---------- Kingfisher
McIntyre, Ray V. ---------- Kingfisher
Pendleton, John Winston ---------- Kingfisher
Smith, Francis E. ---------- Kingfisher
Sturgeon, H. Violet ---------- Hennessey
Taylor, John Robert ---------- Kingfisher

Kiowa County

Allgood, E. A. ---------- Snyder
(Member Jackson)
Bernell, William ---------- Hobart
Braun, J. P. ---------- Hobart
Finch, J. William ---------- Hobart
Hathaway, Alfred H. ---------- Mountain View
Mahone, M. Wilson ---------- Hobart
Phelan, Ralph S. ---------- Hobart
Shriner, Richard F., Jr. ---------- Hobart
Tolbert, J. B. ---------- Mountain View
Watkins, B. H. ---------- 1025 Douglas Las Vegas, N.M.

Latimer County

Booth, G. R., Jr. ---------- Military Service
(Member Pittsburg)
Booth, G. R., Sr. ---------- Wilburton
(Member LeFlore-Haskell)
Callahan, John S. ---------- Wilburton
(Member Pittsburg)

LeFlore County

Baker, F. P. ---------- Talihina
Bevill, S. D. ---------- Poteau
Bradey, Frank L. ---------- Talihina
Cotton, William W. ---------- Poteau
Cunningham, Charles S. ---------- Poteau
Dean, S. C. ---------- Howe
Fair, E. N. ---------- Heavener
Gilliam, W. C. ---------- Spiro
Harvey, John ---------- Heavener
Lowrey, Robert W. ---------- Poteau
Minor, Robert West ---------- Spiro
Rolle, Paul N. ---------- Poteau
Womack, G. J. ---------- Heavener
Woodson, Earl M. ---------- Poteau
Wright, R. L. ---------- Poteau

Lincoln County

Bailey, Carl H. ---------- Stroud
Baugh, Harold T. ---------- Meeker
Burleson, Ned ---------- Prague
Demos, Ross P. ---------- Military Service
Judd, Loyd ---------- Prague

Mileham, Jack ---------- Chandler
Robertson, C. W. ---------- Chandler
Rollins, John G. ---------- Prague
Seelig, Darrell A. ---------- Chandler

Logan County

Fife, Phillips R. ---------- Guthrie
Hahn, L. A. ---------- Guthrie
Hill, C. B. ---------- Guthrie
LeHew, J. Leslie ---------- Guthrie
LeHew, Elton W. ---------- Guthrie
Merrell, Webber W. ---------- Guthrie
Miller, W. C. ---------- Guthrie
Petty, C. S. ---------- Guthrie
Petty, James S. ---------- Guthrie
Ringrose, R. F. ---------- Guthrie
Ritzhaupt, Louis H. ---------- Guthrie
Souter, John E. ---------- Guthrie

Love County

Lawson, Pat ---------- Marietta

Major County

Henley, Thomas H. ---------- Fairview
(Member Garfield-Kingfisher)
McCroskie, M. R. ---------- Fairview
(Member Garfield-Kingfisher)

Marshall County

Cook, Odis A. ---------- Madill
Raff, Joseph S. ---------- Madill
York, J. F. ---------- Madill

Mayes County

Bynum, William R. ---------- Pryor
Cameron, Paul B. ---------- Pryor
Gwartney, Warren G. ---------- Pryor
Haas, H. R. ---------- Disney
(Member Creek)
Lembke, Robert L. ---------- Pryor
Morrow, B. L. ---------- Salina
Pinkerton, Clarence B. ---------- Pryor
Rutherford, S. C. ---------- Locust Grove
Werling, E. H. ---------- Pryor

McClain County

Berkenbile, Glen Lee ---------- Parkland Hosp Dallas, Tex.
Cochrane, J. E. ---------- Byars
Kolb, I. N. ---------- Blanchard
LeMaster, D. W. ---------- Wayne
(Member Tulsa)
Long, W. George ---------- Purcell
McCurdy, W. C. Jr. ---------- Purcell
Royster, R. L. ---------- Purcell

McCurtain County

Clarkson, A. M. ---------- Idabel
Hale, A. Eugene ---------- Idabel
Howard, Thomas D. ---------- Idabel
Loftin, Robert Love ---------- Broken Bow
McBrayer, William H. ---------- Idabel
Rhea, Thomas E. ---------- Idabel
Williams, Woodrow W. ---------- Idabel

McIntosh County

Baker, J. Howard, Jr. ---------- Eufaula
First, F. R. Jr. ---------- Checotah
Wendel, Wm. E. ---------- Eufaula
Wood, James L. ---------- Eufaula

Murray County

Annadown, Paul V. ---------- Sulphur
(Member Pontotoc)
Crandall, Will G. ---------- Sulphur
(Member Carter-Love-Marshall)
Delay, W. D. ---------- Sulphur
(Member Carter-Love-Marshall)
Lewis, R. W. ---------- Sulphur
(Member Pontotoc)
Morton, R. W. ---------- Sulphur
(Member Pontotoc)
Wharton, J. L. ---------- Sulphur
(Member Creek)

Muskogee County

Ballantine, H. T. ---------- Manhattan Bg Muskogee
Beaty, Charles S. ---------- 2211 Callahan Muskogee
Cameron, Alan S. ---------- 1620 W Okmulgee Muskogee
Chandler, Jesse S. ---------- 111½ S 2nd Muskogee
Dandridge, William S. ---------- Barnes Bg Muskogee
Dorwart, Frederic G. ---------- 510 S 11th Muskogee
Doyle, Wm. H. ---------- Barnes Bg Muskogee
Earnest, A. N. ---------- Barnes Bg Muskogee
Elkins, Marvin ---------- 428 Eastside Blv Muskogee
Ewing, Finis W. ---------- 1005 Denver Muskogee
Fite, E. Halsell ---------- 443 N 16 Muskogee
Fite, William P., Jr. ---------- 443 N 16 Muskogee
Fite, W. P. ---------- 443 N 16 Muskogee
Fullenwider, C. G. ---------- Barnes Bg Muskogee
Gafford, Tom S., Jr. ---------- Barnes Bg Muskogee
Gephardt, Maurice C. ---------- 443 N 16 Muskogee
Gray, Virgil B., Jr. ---------- 1119 W Bdwy Muskogee
Green, James L., Jr. ---------- Barnes Bg Muskogee
Hackler, John F. ---------- 519 S 3rd Muskogee
Hamm, S. G. ---------- Haskell
Hewitt, Perry E. ---------- Manhattan Bg Muskogee
Holcombe R. N. ---------- Surety Bg Muskogee
Henry, Eugene M. ---------- 204 N 3rd Muskogee
Hooper, Joel S. ---------- V. A. Hosp Muskogee
(Member Tulsa)
Horn, John E. ---------- 1620 W Okmulgee Muskogee
Johnson, Port ---------- Surety Bg Muskogee
Johnson, S. E. ---------- Commercial Natl Bg Muskogee
Kaiser, G. L. ---------- 1221 W Bdwy Muskogee
Klass, O. C. ---------- Surety Bg Muskogee
Krause, Albert H. ---------- V. A. Hosp Muskogee
Kupka, John F. ---------- Haskell
Lipnick, Louis ---------- V. A. Hosp Muskogee
Matthews, Virgil D. ---------- 1119 W Bdwy Muskogee
McAlister, L. S. ---------- 228 Wall Muskogee
Meares, C. H. ---------- 301 Baltimore Muskogee
Mengel, Chester K. ---------- V. A. Hosp Muskogee
Miller, D. Evelyn ---------- Memorial Station Muskogee
Mollica, Stephen G. ----------
---------- V.A. Municipal Aud Kansas City, Mo.
Neely, Shade D. ---------- Commercial Natl Bg Muskogee
Pratt, T. W. ---------- Rt. 1 Box 536 Muskogee
(Member Ottawa-Craig)
Oglesbee, Carson L. ---------- Manhattan Bg Muskogee
Oldham, I. B. ---------- 426 N 6 Muskogee
Rafter, John R. ---------- Manhattan Bg Muskogee
Reynolds, J. H. ---------- 1119 W Bdwy Muskogee
Reynolds, John, Sr. ---------- First Natl Bk Bg Muskogee
Scott, Howell A. ---------- Commercial Natl Bg Muskogee
Steelman. G. M. ---------- Haskell
Stratton, Emil F. ---------- 443 N 16 Muskogee
Thompson, Milton K. ---------- Surety Bg Muskogee
Tracy, Gilbert W. ---------- 104 N 16 Muskogee
Varian, Thelma S. ---------- 1603 E Okmulgee Muskogee
Weaver, Wm. N. ---------- Barnes Bg Muskogee
White, Charles Ed ---------- 526 N 6 Muskogee
White, J. Hutchings ---------- Surety Bg Muskogee
Witt, Richard E. ---------- V. A. Hosp Muskogee

Wolfe, I. C. 426 N 6 Muskogee
Wood, W. M. Barnes Bg Muskogee
Woodburn, J. Tinder Barnes Bg Muskogee

Noble County

Brown, A. M. Jr. Perry
Evans, A. M. Perry
Martin, Charles E. Perry
Simon, Bill J. Military Service

Nowata County

Adams, Felix M., Jr. Military Service
Barnes, Lynn C., Jr. Nowata
Denny, E. Rankin Nowata
Elliott, James H. Nowata
Grigsby, O. L. Nowata
Lang, S. A. Nowata
Prentess, H. M. Nowata
Roberts, S. P. Nowata

Okfuskee County

Brasfield, John A. Okemah
Cochran, C. M. Okemah
Gissler, N. E. Okemah
Jenkins, W. P. Okemah
Lucas, A. C. Castle
Melton, A. S. Okemah
Reynolds, Charles Weleetka
Sanders, H. M. Boley
Spickard, L. J. Okemah
Whitney, M. L. Okemah

Oklahoma County

Abshier, A. Brooks 1200 N Walker OC
Adams, Robert H. 515 NW 11 OC
Akin, Robert H. 610 NW 9 OC
Albers, Donald D. 301 NW 12 OC
Alford, J. M. 1521 N Shartel OC
Allen, George T. 1200 N Walker OC
Ambrister, Jerome W. 321 W Hill Decatur, Ga.
Amspacher, James 525 NW 11 OC
Anderson, Hubert M. 1212 N Hudson OC
Andrews, Martin H. 4725 N May OC
Annadown, Ruth Med Arts Bg OC
Anspaugh, R. D. 1200 N Walker OC
Appleton, M. M. 610 NW 9 OC
Archer, Homer V. 1220 N Walker OC
Armstrong, Noel L. 4725 N May OC
Atkins, Charles N. 624 NE 4 OC
Avey, H. Thompson 437 NW 12 OC
Baker, Marguerite M. 1200 NE 63 OC
Balyeat, Ray M. Med Arts Bg OC
Barker, Marcus S. Leonhardt Bg OC
Barkett, N. F. V. Med Arts Bg OC
Barnes, Harry E. Choctaw
Barry, George N. 1214 N Hudson OC
Batchelor, John J. Med Arts Bg OC
Bates, C. E. 921 NE 13 OC
Bayley, Robert H. 800 NE 13 OC
Baylor, Richard A. 425 NW 12 OC
Bednar, Gerald Med Ats Bg OC
Bell, A. H. 301 NW 12 OC
Bell, James P. 605 NW 10 OC
Bell, Joseph P. 3409 W 20 Topeka, Kan.
Bennett, Henry G., Jr. 1111 N Lee OC
Bennett, Howard A. 801 NE 13 OC
Berger, E. Stanley 509 NW 32 OC
Berry, Charles N. Med Arts Bg OC
Bielstein, C. M. 301 NW 12 OC
Binder, Harold J. 1220 N Walker OC
Binkley, J. G. Municipal Bg OC
Binkley, J. Samuel Med Arts Bg OC
Bird, Robert M. 800 NE 13 OC
Blachly, Lucile Spire 2752 NW 18 OC
Blair, Clifford J. 1200 N Walker OC
Blue, Johnny A. 430 NW 12 OC
Boatright, Lloyd C. Cravens Bg OC
Bodine, Charles 1220 N Walker OC
Boggs, James T. 1200 N Walker OC
Bohan, Kenneth 625½ NW 10 OC
Bolend, Rex G. V. A. Hosp Little Rock, Ark.
Bond, William L. 1200 N Walker OC
Bondurant, C. P. Med Arts Bg OC
Bonham, Wm. L. 1111 N Lee OC
Borecky, George L. 521 NW 11 OC
Boyle, James S. 525 NW 11 OC
Bozalis, George S. 711 NW 10 OC
Bradford, Vance 430 NW 12, OC
Bradley, Harold C. Cravens Bg OC
Branham, D. W. 1200 N Walker OC
Brewer, A. M. 621 NW 10 OC
Bricker, Earl M., Jr. 1200 N Walker OC
Brightwell, Richard J. Scott Air Force Base, Ill.
Brown, C. Alton Home State Life Bg OC
Brown, D. Nello 510 N W12 OC
Brown, Gerster W. Med Arts Bg OC
Brown, Irwin H. 801 NE 13 OC
Brown, John M. 438 NW 12 OC
Buchner, H. W. 1212 N Hudson OC
Burke, Richard M. Military Service
Burton, John Flack 434 NW 13 OC
Butler, H. W. 1200 N Walker OC
Buxton, Merwin Thomas, Jr. 525 NW 11 OC
Bynum, Turner 510 NW 12 OC
Cailey, Leo F. Rt 1 Box 165 OC
Campbell, Coyne H. Box 6246 OC
Campbell, David A. 2207 Oxford Way OC
Campbell, J. Moore III Med Arts Bg OC
Cannon, J. M. 210½ W Commerce OC
Capps, J. F. Box 5573 OC
Carey, John M. 301 NW 12 OC
Carpenter, Richard E. 1214 N Hudson OC
Casebeer, Robert L. 1212 N Hudson OC
Casper, P. D. 4405 SE 28 OC
Cates, Albert 2733 NW 20 OC
Caviness, J. J. Med Arts Bg OC
Charney, Louis H. 528 NW 12 OC
Clark, Ralph O. 301 SW 23 OC
Clay, Richard A. 415 NW 11 OC
Clymer, C. E. Med Arts Bg OC
Clymer, John H. Med Arts Bg OC
Cochran, Bryce H. P O Bg Midwest City
Cochrane, Charles R. Military Service
Coggins, F. W. 5117 N Barnes OC
Coil, Jenner G. Med Arts Bg OC
Coleman, William O. 1220 N Walker OC
Coley, A. J. 416 NW 13 OC
Coley, J. H. 416 NW 13 OC
Collins, Glenn S. 119 E Atchinson Plaza Midwest City
Collins, Joe Ed 1325 SW 29 OC
Collins, Mabelle S. 1325 SW 29 OC
Colmore, John P. 800 NE 13 OC
Colvert, J. R. 1319 Classen Dr OC
Cook, C. E., Jr. Military Service
Cooke, Everette E. 1212 N Hudson OC
Coppedge, Orville N. 301 SW 23 OC
Corder, V. Woodard 620 NW 9 OC
Coston, Tullos O. 1111 N Lee OC
Cotten, Daisy C. 525 NW 11 OC
Cox, James A., Jr. 1301 NE 6 OC
Cox, Marcus L. 925 Britton Rd OC

Coyle, John J. 1200 N Walker OC
Coyner, Wallace R. Edmond
Crawford, Sterling 1200 N Walker OC
Crick, L. E. 2207 Oxford Way OC
Cunningham, John A. First Natl Bg OC
Cushing, Vernon D. 711 NW 10 OC
Daniels, Harry A. 610 NW 10 OC
Danstrom, John R. Med Arts Bg OC
Darrow, Frank E. 216 SW 24 OC
Dawson, Clarence B. 528 NW 12 OC
Delhotal, Charles E., Jr. 1200 N Walker OC
Dersch, Walter H. Med Arts Bg OC
Deupree, Harry L. 1111 N Lee OC
DeVore, John W. 1214 N Hudson OC
Dewar, James P. 800 NE 13 OC
Dill, Francis E. Med Arts Bg OC
Dixon, Robert W. 1443 Westwood OC
Dodson, Harrell C. 411 NW 11 OC
Donahue, Hayden H. 531 State Capitol OC
Donnell, John J. 1214 N Hudson OC
Doudna, Hubert E. 620 NW 9 OC
Dowling, William J. 215 NW 17 OC
Dunn, J. Hartwell 1212 N Hudson OC
Earp, Ancel, Jr. Med Arts Bg OC
Eastland, William E. Med Arts Bg OC
Edmundson, Walter F. Med Arts Bg OC
Edwards, Martin Dale 846 Bush San Francisco, Cal.
Edwards, Rheba Huff 710 NE 13 OC
Eley, N. P. 1319 Classen Dr OC
Eliel, Leonard P. 825 NE 13 OC
Elliott, Arthur F. 807 NW 23 OC
Ellis, Leonard J., Jr. 4101 N MacArthur Blv OC
Emenhiser, Lee K. 511 NW 11 OC
Engles, Charles F. 2416 S Harvey OC
Engles, Loretta G. 2416 S Harvey OC
Epley, C. O. 1200 N Walker OC
Erwin, Paul D. 430 NW 12 OC
Eskridge, J. B., Jr. 1220 N Walker OC
Eskridge, James B., III 1220 N Walker OC
Everett, Mark R., Ph.D. 800 NE 13 OC
Fagin, Herman 528 NW 12 OC
Fair, E. E. Military Service
Faris, Brunel D. Med Arts Bg OC
Farr, Louise K. 4030 Springlake Dr OC
Farris, Edward M. 1111 N Lee OC
Farris, Emil P. 528 NW 12 OC
Felton, Jean S. 800 NE 13 OC
Ferguson, E. Gordon Med Arts Bg OC
Finley, G. E. 128 NE 2 OC
Fishman, C. J. 132 NW 4 OC
Fleetwood, D. H. Edmond
Flock, Eugene R. 800 NE 13 OC
(Member Atoka-Bryan-Coal)
Florence, John 1200 N Walker OC
Foerster, Hervey A. 1220 N Walker OC
Forester, V. R. 1111 N Lee OC
Foster, Claude F. 318 SW 25 OC
Frank, L. S. 1111 N Lee OC
Freede, Charles L. 430 NW 12 OC
Freede, H. J. 430 NW 13 OC
Freeman, Charles W. 625½ NW 10 OC
Frew, A. L. 528 NW 12 OC
Frierson, S. E. 2203 N Hudson OC
Fryer, Samuel R. 511 NW 11 OC
Fulton, C. C. Med Arts Bg OC
Funnell, Joseph W. 525 NW 11 OC
Furman, Robert H. 825 NE 13 OC
Gable, James J., Jr. 301 NW 12 OC
Galbraith, Hugh M. First Natl Bg OC
Gallagher, C. A. 610 NW 9 OC
Gamble, Shelby G. 800 NE 13 OC
Garrison, George H. 1111 N Lee OC
Gee, O. J. Med Arts Bg OC
Geigerman, David J. 1220 N Walker OC
George, Ella Mary 800 NE 13 OC
Gilbert, Leon N. Bethany
Glasgow, Jack G. 4101 N MacArthur Blv OC
Glasser, Samuel M. 921 NE 13 OC
Glismann, M. B. 430 NW 12 OC
Glomset, John L. 2420 Classen Blv OC
Goldfain, E. 228 NW 13 OC
Goodwin, R. Q. 1111 N Lee OC
Googe, Mary Carolyn 800 NE 13 OC
Graening, P. K. Med Arts Bg OC
Graham, A. T. 26 SW 25 OC
Greer, Allen E. 430 NW 12 OC
Groves, Hassel E. 318 W Commerce OC
Guthrey, George H. 510 NW 12 OC
Hall, Clark H. Med Arts Bg OC
Hansen, Fred, LL.B. Attorney Gen Office OC
Harbison, Edgar F. 1705 Dorchester Dr OC
Harris, Clyde E. 2419 N Walker OC
Harris, Henry W. 1200 N Walker OC
Harris, Richard L. 3832 N May OC
Harris, Russell D. 605 NW 10 OC
Harrison, Lynn 2850 NW 23 OC
Hartford, W. K. 1111 N Lee OC
Harvey, Charles M. 67 and May OC
Haskett, Paul E. 1941 NW 19 OC
Hassler, F. R. State Capitol Bg OC
Hassler, Grace C. 1111 N Lee OC
Hayes, Basil A. 625 NW 10 OC
Hays, Carolyn Penn Hosp Philadelphia, Pa.
Hays, Marvin B. 411 NW 11 OC
Hazel, Onis G. Med Arts Bg OC
Heatley, John 701 NE 42 OC
Hellams, Alfred A. 1200 N Walker OC
Hellbaum, Arthur A. 800 NE 13 OC
Hendren, Scott 2909 S Harvey OC
Herrmann, Jess 525 NW 11 OC
Hicks, Fred B. Med Arts Bg OC
Hirshfield, A. C. Med Arts Bg OC
Hodge, James C. 1243 W Britton Rd OC
Hoke, Lillian 2847 Wilshire Blv OC
Holden, E. Neal 1035 NE 36 OC
Hollis, Lynn E. Tinker Air Force Base OC
Holt, Robert P. 301 NW 12 OC
Hood, F. Redding 1220 N Walker OC
Hopps, Howard C. 801 NE 13 OC
Hough, Jack Van Doren 301 NW 12 OC
Howard, R. M. 815 NW 15 OC
Howard, R. Palmer 825 NE 13 OC
Howard, Robert B. 1200 N Walker OC
Hubbard, John R. 1501 NE 11 OC
Hubbard, Ralph W. 1501 NE 11 OC
Hubbard, Wm. E. 1501 NE 11 OC
Huff, Dick H. 711 NW 10 OC
Huggins, J. R. Med Arts Bg OC
Hyroop, Gilbert L. 1219 N Walker OC
Hyroop, Muriel Box 6246 OC
Ingle, John D. 1200 N Walker OC
Ishmael, William K. 605 NW 10 OC
Jackson, A. R. 2519 S Robinson OC
Jacobs, Minard F. Med Arts Bg OC
Jeter, Hugh 1200 N Walker OC
Jobe, Virgil R. 1213 N Hudson OC
Johnson, Philip C., Jr. 921 NE 13 OC
Jones, Hugh Med Arts Bg OC
Jones, Phyllis E. Med Arts Bg OC
Jones, Ralph E. Nicoma Park
Kahn, Robert W. Med Arts Bg OC
Kalmon, Edmond H. 301 NW 12 OC

Keller, W. Floyd ..... Med Arts Bg OC
Kelso, Joseph ..... 525 NW 11 OC
Keltz, Bert F. ..... 1111 N Lee OC
Kennedy, Julian J. ..... Edmond
Kernodle, Stratton E. ..... First Natl Bg OC
Kimball, Gale Robert ..... 925 NW Britton OC
Kimball, George H. ..... 1111 N Lee OC
Kimerer, Neil Banard ..... 525 SW 2 OC
King, Robert W. ..... 1111 N Lee OC
Krieger, Carl, Jr. ..... Military Service
Kuhn, John F. ..... 1111 N Lee OC
Lachman, Ernest ..... 801 NE 13 OC
Lain, E. S. ..... 1706 Elmhurst Ave OC
Lamb, John H. ..... Med Arts Bg OC
Lambke, Phil M. ..... 105 NW 23 OC
LaMotte, George A. ..... Colcord Bg OC
Lane, Marie Thaxton ..... 9407 N Francis OC
Lane, W. H. ..... 9407 N Francis OC
Langston, Wann ..... 1214 N Hudson OC
Lawson, Robert Clyde ..... 301 NW 12 OC
Leney, Fannie Lou ..... 525 NW 11 OC
Leonard, Charles E. ..... 528 NW 12 OC
Lester, Eugent F. ..... 515 NW 11 OC
Levy, Bertha M. ..... 1200 N Walker OC
Lincoln, Richard B. ..... Med Arts Bg OC
Lingenfelter, F. M. ..... 1200 N Walker OC
Lisle, A. C., Jr. ..... 1200 N Walker OC
Lttle, John R. ..... 3626 N Western OC
Long, LeRoy D. ..... Med Arts Bg OC
Loucks, James E. ..... Military Service
Loughmiller, Robert F. ..... 528 NW 12 OC
Love, R. S. ..... 2701 NW 19 OC
Lowe, Robert C. ..... 800 NE 13 OC
Lowry, David C. ..... 528 NW 12 OC
Lowry, Dick Jr. ..... 1200 N Walker OC
Loy, C. F. ..... 927 NE 13 OC
Loy, Robert L., Jr. ..... 521 NW 11 OC
Luton, James P. ..... Med Arts Bg OC
Lyon, J. I. ..... Edmond
Lysaught, J. Neill ..... 301 NW 12 OC
Macdonald, J. C. ..... 301 NW 12 OC
Macrory, Paul D. ..... Bethany
Margo, Elias ..... 650 N W10 OC
Margo, Marvin K. ..... 605 NW 10 OC
Maril, Joseph J. ..... Med Arts Bg OC
Maril, William D. ..... 807 NW 23 OC
Martin, Howard C. ..... 3626 N Western OC
Martin, J. T. ..... 3110 Harvey Pkwy OC
Masters, Paul L. ..... 4405 SE 28 OC
Masterson, Maude M. ..... 1200 N Walker OC
Mathews, Grady F. ..... 3400 N Eastern OC
Matthews, Sanford ..... 1319 Classen Dr OC
Mauldin, Howard Paul ..... 1303 SW 29 OC
Mayberry, R. H. ..... 800 NE 13 OC
McBride, Earl D. ..... 605 NW 10 OC
McClure, C. W. ..... 415 NW 11 OC
McCollum, W. T. ..... 437 NW 12 OC
McCreight, Wlliam G. ..... 525 NW 11 OC
McDaniels, Samuel J. ..... Military Service
McGee, J. P. ..... 1200 N Walker OC
McHenry, L. Chester ..... Med Arts Bg OC
McInnis, Dalton Blue ..... 2912 S Walker OC
McInnis, J. Thermon ..... 2912 S Walker OC
McKee, Robert ..... 522 NW 13 OC
McKinney, Milam F. ..... Med Arts Bg OC
McLauchlin, James R. ..... 528 NW 12 OC
McNeill, P. M. ..... Med Arts Bg OC
Mercer, R. D. ..... 921 NE 13 OC
(Member Okmulgee)
Messenbaugh, J. F. ..... 1111 N Lee OC
Messinger, R. P. ..... 807 NW 23 OC

Miller, Jess E. ..... 1200 N Walker OC
Miller, O. H. ..... 400 NW 13 OC
Miller, Wm. A. ..... 1200 N Walker OC
Mills, R. C. ..... Hightower Bg OC
Moor, Hiram D. ..... 1409 N Portland OC
Moore, C. D. ..... 119 N Robinson OC
Moore, Ellis ..... Med Arts Bg OC
Moore, Samuel T. ..... 411 NW 11 OC
Moore, William R. ..... 425½ SW 44 OC
Moorman, James Floyd ..... 1220 N Walker OC
Morgan, C. A. ..... Home State Life Bg OC
Morgan, C. Wesley ..... 600½ NE 4 OC
Morgan, Robert J. ..... 1111 N Lee OC
Morgan, Vance F. ..... Harrah
Morledge, Walker ..... 1220 N Walker OC
Morrison, H. C. ..... 807 NW 23 OC
Morrison, J. W. ..... 1200 N Walker OC
Mosley, K. T. ..... 801 NE 13 OC
Moth, M. V. ..... 2001 N Lottie OC
Mulvey, B. E. ..... 1111 N Lee OC
Murdoch, Raymond L. ..... Med Arts Bg OC
Murray, E. Cotter ..... 27 W Commerce OC
Murray, Ella H. ..... 905 NW 95 OC
Musallam, Sam N. ..... Med Arts Bg OC
Musick, Elmer R. ..... Med Arts Bg OC
Mussil, W. M. ..... Med Arts Bg OC
Nagle, Patrick S. ..... 1021 N Lee OC
Neel, Roy L. ..... 521 NW 11 OC
Neff, Everett B. ..... 1200 N Walker OC
Nelson, Arnold G. ..... 7016 SE 15 Midwest City
Nicholson, Ben H. ..... 301 NW 12 OC
Noell, R. L. ..... 1111 N Lee OC
Obermann, Charles F. ..... Med Arts Bg OC
O'Donoghue, Don H. ..... 1111 N Lee OC
Oesterreicher, Donald L. ..... 5108 N Miller OC
Ogg, Kenneth G. ..... 2420 Classen Blv OC
O'Leary, Charles M. ..... Med Arts Bg OC
Olson, Forrest W. ..... 909 SW 29 OC
Opper, Marshall ..... 909 SW 29 OC
Owens, J. N., Jr. ..... 605 NW 10 OC
Parker, Joe M. ..... 411 NW 11 OC
Parrish, J. M., Jr. ..... 522 NW 13 OC
Parrish, Pamela P. ..... 621 NW 40 OC
Parrish, R. Gibson ..... 620 NW 9 OC
Paschal, Wm. R. ..... 430 NW 12 OC
Patzer, Reynold ..... 217 NW 13 OC
Paulson, Alvin W. ..... 927 NE 13 OC
Paulus, D. D. ..... 301 NW 12 OC
Payne, Ralph E. ..... Edmond
Payne, Richard ..... 800 NE 13 OC
Payte, J. I. ..... 2429 Aurora Ct OC
Penick, Grider ..... Colcord Bg OC
Perry, John M., Jr. ..... 515 NW 11 OC
Peter, Maurice L. ..... Municipal Bg OC
Pickard, John C. ..... 1111 N Lee OC
Pitts, James B., Jr. ..... 1111 N Lee OC
Points, Thomas C. ..... 623 NW 10 OC
Pollock, Ira O. ..... 1200 N Walker OC
Porter, W. H. ..... 4405 SE 28 OC
Postelle, J. M. ..... 611 W Mulberry San Antonio, Tex.
Pounders, Carroll M. ..... 1220 N Walker OC
Price, Joel S. ..... 1200 N Walker OC
Prosser, Moorman ..... Med Arts Bg OC
Puckett, Carl ..... PO Box 1661 OC
(Member Rogers-Mayes)
Pugsley, William S. ..... 301 NW 12 OC
Rainer, Jeanne Elise McKinnon ..... 1111 N Lee OC
Randels, George R. ..... 7016 SE 15 Midwest City
Records, J. W. ..... 301 NW 12 OC
Redmond, Robert F. ..... 521 NW 11 OC
Reed, James R. ..... Med Arts Bg OC

Reichmann, Ruth S.____124 NW 15 OC
Reid, John R.____2420 Classen Blv OC
Reiff, William H.____437 NW 12 OC
Renfrow, William B.____620 NW 9 OC
Reynolds, Bill J.____106½ Mid-America Midwest City
Ricks, James R.____Med Arts Bg OC
Ridgeway, Elmer, Jr.____2750 NW 23 OC
Riely, Lea A.____Rt 1 Brooks Rd New Canaan, Conn.
Rigual, Jose R.____2033 NW 31 Ter OC
(Member LeFlore-Haskell)
Rix, A. Alvin, Jr.____525 NW 11 OC
Robertson, Edwin N., Jr.____301 NW 12 OC
Robinson, J. H.____301 NW 12 OC
Roddy, John A.____521 NW 11 OC
Rogers, Gerald____1111 N Lee OC
Rose, Dayton M.____800 NE 13 OC
(Member Okfuskee)
Ross, S. P.____1410 Camden Way OC
(Member Pontotoc)
Rountree, Charles____525 NW 11 OC
Royer, Charles A.____430 NW 12 OC
Rucks, W. W., Jr.____301 NW 12 OC
Rucks, W. W., Sr.____301 NW 12 OC
Ruhl, N. E.____Rt 2 Box 258F OC
Russo, Peter E.____1200 N Walker OC
Rutherford, V. M.____328 E Aeronca Midwest City
Rutledge, B. J.____1200 N Walker OC
Salomon, A. L.____1111 N Lee OC
Sanger, Fenton A.____921 NW 23 OC
Sanger, Winnie M.____1501 Camden Way OC
Sanger, Welborn W.____1111 N Lee OC
Sapper, H. V. L.____430 NW 12 OC
Schmidt, Arthur E.____521 NW 11 OC
Schneider, Edward M.____921 NE 13 OC
Schneider, Robert A.____800 NE 13 OC
Seba, Chester____1925 NW 23 OC
Sepkowitz, Samuel____67 & May Ave OC
Serwer, Milton J.____1200 N Walker OC
Shackelford, John W.____3400 N Eastern OC
Shadid, Fred V.____3200 N May OC
Shaffer, Jerome D.____1200 N Walker OC
Shaver, S. R.____430 NW 12 OC
Shelton, John W.____632 S Coronado Los Angeles, Cal.
Sheppard, Mary V. S.____Med Arts Bg OC
Shircliff, E. E.____107 NW 14 OC
Shoemaker, H. A. Ph.D.____801 NE 13 OC
Shorbe, Howard B.____605 NW 10 OC
Singleton, Harry E.____1220 N Walker OC
Sleeper, Harold G.____Box 6246 OC
Smith, Byron F.____510 NW 12 OC
Smith, Delbert G.____1111 N Lee OC
Smith, Ralph____Med Arts Bg OC
Snoddy, Wm. T.____601 __W 9 OC
Snow, J. B.____625 NW 10 OC
Sowell, H. K.____620 NW 9 OC
Stacy, J. R.____411 NW 11 OC
Stanbro, Gregory E.____1111 N Lee OC
Starry, L. J.____1200 N Walker OC
Stevens, James W.____5611B S Penn OC
Stillwell, Robert J.____American Natl Bg OC
Stone, S. N., Jr.____528 NW 12 OC
Stout, Hugh A.____1200 N Walker OC
Stout, Marvin E.____209 NW 13 OC
Stream, M. M.____2004 NE 29 OC
Stream, Lawrence____800 NE 13 OC
Strecker, W. E.____1104 N Lee OC
Strenge, Henry B.____800 NW 13 OC
Sturm, Robert T.____1111 N Lee OC
Sukman, Robert____921 NE 13 OC
Sullivan, Elijah E____Med Arts Bg OC
Taylor, Charles B.____418 NE 15 OC
Taylor, Jim M.____1111 N Lee OC
Taylor, L. C.____620 NW 9 OC
Taylor, Robert L.____807 NW 23 OC
Taylor, William M.____Rt 4 Box 609 C OC
Thompson, Wayman J.____1220 N Walker OC
Thompson, Wm. Best____528 NW 12 OC
Threlkeld, Lal D.____1220 N Walker OC
Toma, Paul____2112 NW 12 OC
Tompkins, S. Fulton____1111 N Lee OC
Tool, Charles D.____921 NE 13 OC
Townsend, Cary W.____Med Arts Bg OC
Trent, Robert I.____1111 N Lee OC
Tullius, Philip G.____1200 N Walker OC
Turner, Henry H.____1200 N Walker OC
Vickers, Paul M.____528 NW 12 OC
Von Wedel, Curt____610 NW 9 OC
Wade, Glen F.____1111 N Lee OC
Wails, T. G.____Med Arts Bg OC
Waldrop, Wm.____605 NW 10 OC
Walker, J. Robert____620 NW 9 OC
Watson, O. Alton____1200 N Walker OC
Weber, Fred W.____P O Bg Midwest City
Wells, Eva____Med Arts Bg OC
Wells, Lois L.____PO Box 493 DeBary, Fla.
Wenger, T. R.____800 NE 13 OC
(Member Pottawatomie)
West, Kelly M.____1200 N Walker OC
West, W. K.____1200 N Walker OC
Westfall, Leslie M.____1502 Wilshire Blv OC
White, Oscar____1200 N Walker OC
White, Phil E.____318 NW 13 OC
Wiggins, Carryl W.____921 NE 13 OC
Wildman, S. F.____Med Arts Bg OC
Wilkins, Harry____525 NW 11 OC
Williams, Byron E.____525 NW 11 OC
Williams, Leonard C.____1200 N Walker OC
Wilson, Charles H.____Med Arts Bg OC
Winn, George L.____711 NW 10 OC
Winningham, Elbert V.____2540 NW 25 OC
Witten, H. B.____921 NE 13 OC
(Member Cleveland-McClain)
Wolever, LeRoy A.____328 E Aeronca Midwest City
Wolf, Stewart G., Jr.____800 NE 13 OC
Wolff, J. Powers____1220 N Walker OC
Wolohon, H. C.____3328 Classen Blv OC
Woodward, Neil W.____631 NW 10 OC
Wright, Harper, Jr. Louisville Gen Hosp Louisville, Ky.
Wynn, Noble F.____Edmond
Wyrick, Richard____Med Arts Bg OC
Young, A. M., III____528 NW 12 OC
Young, C. Jack____1200 N Walker OC
Young, Edgar W., Jr.____511 NW 11 OC

Okmulgee County

Alexander, Lin____Okmulgee
Alexander, Robert Lin____Okmulgee
Beller, Cleve____Okmulgee
Bollinger, I. W.____Henryetta
Boswell, H. D.____Henryetta
Buell, Arthur L.____Okmulgee
Collins, Wm. Robert____Okmulgee
Cotteral, John R____Henryetta
Haynes, W. M.____Henryetta
Kilpatrick, G. A.____Henryetta
Leslie, S. B., Jr.____Okmulgee
Leslie, S. B., Sr.____Okmulgee
Maben, Charles S.____Okmulgee
McCauley, D. W.____Okmulgee
McKinney, G. Y.____Henryetta
Ming, C. M.____Okmulgee
Mitchener, W. C.____Okmulgee
Myers, Jack Paul____Okmulgee

Simpson, N. N. — Henryetta
Smith, Carlton E. — Henryetta
Stephens, A. M., Jr. — Okmulgee
Tracewell, George L. — Okmulgee

Osage County

Alexander, E. T. — Barnsdall
Bond, Eugene C. — Military Service
Cashman, Charles A. — Shidler
Dean, Robert Earle — Military Service
Geiger, William, Jr. — Fairfax
Guild, Carl H., Sr. — Shidler
Loy, Richard W. — Pawhuska
Loy, William A. — Pawhuska
Manning, Wesley — Pawhuska
Mays, William G. — Fairfax
Mazzarella, Vincent — Hominy
McDonald, Glen W. — Pawhuska
Ray, C. Cody — Pawhuska
Smith, R. O. — Hominy
Walker, G. I. — Hominy
Worten, Divonis — Pawhuska

Ottawa County

Butler, V. V. — Picher
Carson, David — Fairland
Chesnut, W. G. — Miami
Connell, M. A. — Picher
Cosby, Glenn W. — Miami
DeTar, George A. — Miami
Ford, Harry C. — Miami
Graham, Rex M. — Miami
Harvey, Rosemary — Miami
Hetherington, L. P. — Miami
Highland, John E. — Miami
Jacoby, J. Sherwood — Commerce
Letcher, Charles Wesley — Miami
McNaughton, G. P. — Miami
Ritter, N. R. — Picher
Russell, Richard — Miami
Russell, Richard Lee — Military Service
Shelton, B. Wright — Miami
Wendelken, Harold W. — Miami
Wormington, F. L. — Miami

Pawnee County

Gentry, E. Lee — Pawnee
(Member Tulsa)
Haddox, C. H. — Pawnee
Hargrove, Robert D. — Pawnee
Lehew, J. L., Sr. — Pawnee
Saddoris, M. L. — Cleveland
Spaulding, H. B. — Ralston
Waters, Claude B. — Pawnee

Payne County

Bassett, Clifford M. — Cushing
Burner, Jacob O. — Ok A & M College Stillwater
Curnow, Dorothea E. — Ok A & M College Stillwater
Davidson, W. N. — Cushing
Davis, William O. — Cushing
Freed, Leon C. — Perkins
Fry, Powell E. — 416 Washington Stillwater
Garnier, Wm. H. — Natl Bk Bg Stillwater
Gathers, G. B. Jr. — 1524 W 8 Stillwater
Green, J. Douglas — Cushing
Humphreys, D. W. — Cushing
Martin, E. O. — Cushing
Martin, James D. — Cushing
Martin, John W. — Cushing
McCluer, Shirley — Ok A & M College Stillwater
Moore, Clifford W. — 423 Main Stillwater
Nelson, Harold G. — 408 Main Stillwater
Puckett, H. L. — 1601 W 9 Stillwater
Reding, Anthony C. — 514 W 9 Stillwater
Rigg, Robert Rolland — A & M Infirmary Stillwater
Rippy, Orville M. — 1701 W 9 Stillwater
Roberts, R. E. — 1610 W 9 Stillwater
Sanders, Harold R. — 408 S Main Stillwater
Smith, A. B. — 408 S Main Stillwater
Smith, Haskell — 523 Lewis Stillwater
Thorp, Edward M. — Cushing
Waggoner, Roy E. — 115½ W 7 Stillwater
Weber, Roxie A. — A & M Infirmary Stillwater
Wilhite, L. R. — Perkins

Pittsburg County

Bartheld. Floyd T. — Med Arts Bg McAlester
Brown, Bruce H. — 3rd & Seminole McAlester
Brown, George M., Jr. — 3rd & Seminole McAlester
Camp, John N. — Box 97 McAlester
Clemens, David C. — Hartshorne
Dakil, L. N. — 118½ E Choctaw McAlester
Dakil, Samuel E. — 118½ E Choctaw McAlester
Ellis, Henry A. — Kiowa
Galbraith, Ben T. — 3rd & Seminole McAlester
Greenberger, Edward M. — Med Arts Bg McAlester
Harkins, Richard A. — Med Arts Bg McAlester
Henry, M. L. — Med Arts Bg McAlester
Holland, C. K. — 3rd & Seminole McAlester
Kuyrkendall, L. C. — 117 N First McAlester
Lerblance, William P., Jr. — Hartshorne
Lively, C. E. — Med Arts Bg McAlester
McCarley, T. H. — Med Arts Bg McAlester
Norman, S. L. — 3rd & Seminole McAlester
Park, John F. — 3rd & Seminole McAlester
Rice, O. W. — 433 N 2nd McAlester
Shuller, E. H. — 3rd & Seminole McAlester
Shuller, Thurman — 3rd & Seminole McAlester
Stough, A. R. — Med Arts Bg McAlester
Switzer, Fred D. — 3rd & Seminole McAlester
Wheeler, H. C. — 3rd & Seminole McAlester
Williams, C. O. — 13½ E Choctaw McAlester
Willour, L. S. — 3rd & Seminole McAlester
Wilson, Herbert Alexander — Box 18 McAlester

Pontotoc County

Breco, Joseph G. — 907 Minn Corpus Christi, Tex.
Burns, S. L. — Stonewall
Cowling, Robert E. — Ada
Dean, W. F. — Ada
Deese, E. F. — Ada
Gill, Wm. T. — Ada
Gullatt, Ennis M. — Ada
Gwin, Jerry B. — Ada
Harrison, Stearley P. — Ada
Haugen, I. J. — Ada
Hicks, Melvin C., Jr. — Ada
Hohl, James F. — Ada
Martin, Frank J. — Ada
McBride, Ollie — Ada
McKeel, Sam A. — Ada
Miller, O. H. — Ada
Morey, John — Ada
Muntz, E. R. — Ada
Needham, C. F. — Ada
Northrip, Ray U. — Ada
Osborn, Carl D. — Ada

Padberg, E. D.----------Ada
Peterson, William G.----------Ada
Ramsay, David C.----------Ada
Seaborn, T. L.----------Ada
Stephens, George K.----------Ada
Sugg, Alfred R.----------Ada
Taylor, Clarence P.----------Ada
Welborn, O. E.----------Ada
Welborn, Orange M.----------Ada
Yagol, H. B.----------Ada

Pattawatomie County

Alley, Ralph Martin--801 N Vassar Albuquerque, N.M.
Baxter. George S.----------624 N Bdwy Shawene
Baxter, Jack W.----------Military Service
Carson, John M.----------14 E 9 Shawnee
Combs, Leon D.----------Med Arts Ctr Shawnee
Davis, Francis A.----------Med Arts Ctr Shawnee
Gallagher, John----------Piqua, Ohio
Gallaher, Clinton--------American Natl Bg Shawnee
Gallaher, Paul----------Federal Bk Bg Shawnee--
Gauchat, A. C.----------14 E 9 Shawnee
Hayes, John R.----------624 N Bdwy Shawnee
Hirst, Claude M.----------624 N Bdwy Shawnee
Hughes, Horton E.----------14 E 9 Shawnee
Johnson, William B.----------624 N Bdwy Shawnee
Kayler, R. C.----------McLoud
Keen, Frank M.----------624 N Bdwy Shawnee
Kethley, Jerold Dudley--------624 N Bdwy Shawnee
Loudon, James D.----------14 E 9 Shawnee
Lowenstein, Bernard----------Indian San Shawnee
Navin, Kenneth----------218 N Philadelphia Shawnee
Newlin, Frances P.----------Masonic Bg Shawnee
Paramore, C. F.----------Med Arts Ctr Shawnee
Rice, E. Eugene-------American Natl Bk Bg Shawnee
Saylor, Robert M.----------PO Box 306 Shawnee
Schmidt, Helen Hughes----------14 E 9 Shawnee
Thorne, Bert Ennis----------14 E 9 Shawnee
Williams, Alpha M.----------Petroleum Bg Shawnee
Young, Clarence C.----------225 N Bell Shawnee
Zumwalt, Robert B.----------Tecumseh

Pushmatoho County

Haddox, A. W.----------Antlers
Huckabay, B. M.----------Antlers

Rager Mills County

Buster, Frank----------Cheyenne
(Member Beckham)

Rogers County

Anderson, Fred A.----------Claremore
Anderson, W. D.----------Claremore
Gordon, Minor E.----------Claremore
Holt, Orville U.----------Claremore
Howard, Walter A.----------Chelsea
Jennings, Monroe R.----------Claremore
Melinder, Roy J.----------Claremore
Thomas, Denton B.----------Chelsea

Seminole County

Austerman, Warrington----------Konowa
Brown, Forest R.----------Wewoka
Bunch, A. H.----------Seminole
Chambers, Claude S.----------Seminole
Davis, George----------Seminole
Deaton, Andy N.--------V A Hosp Fayetteville, Ark.
Grimes, John P.----------Wewoka
Harrison, Gene H.----------Seminole
Jones, W. E., Jr.----------Seminole
Jones, W. E., Sr.----------Seminole
Knight, Claude B.----------Wewoka
McGovern, J. D.----------Wewoka
Mosher, D. D.----------Seminole
Parrish, Jack W.----------Seminole
Price, J. T.----------Seminole
Walker, A. A.----------Wewoka
Wood, Jack A.----------Military Service
Wood, J. D.----------Seminole

Sequayah County

Currie, R. L.----------Sallisaw
Endres, Robert K.-------
------St Louis Children Hosp St. Louis, Mo.
Morrow, John A.----------Sallisaw

Stephens County

Broach, R. Fred----------1305 N 10 Duncan
Cheatwood, W. R.----------925 Willow Duncan
Davis, Randell E.----------926 Willow Duncan
Ellis, Richard A.----------810½ Main Duncan
Floyd, John H.----------Comanche
Gottschalk, Paul R.----------1305 N 10 Duncan
Gregston, Jack L.----------Marlow
Ivy, Wallis S.----------701 N 12 Duncan
Keller, J. P.----------6 N 9th Duncan
Lindley, E. C.----------1305 N 10 Duncan
Lindley, E. H.----------1305 N 10 Duncan
Patterson, F. L.----------810½ Main Duncan
Patterson, Fred L., Jr.----------810½ Main Duncan
Patterson, James L., Sr.----------6 N 9th Duncan
Ryan, Dana C., Jr.----------1305 N 10 Duncan
Smith, Casper H., Jr.----------815½ Walnut Duncan
Talley, C. N.----------Marlow
Thomasson, E. B.----------807½ Main Duncan
Walker, W. K.----------Marlow
Weedn, Alton J.----------117 N 10 Duncan

Texos County

Blackmer, L. G.----------Hooker
Boggs, Nathan----------Goodwell
Buford, E. L.----------Gymon
Cawley, F. P.----------Hooker
Hayes, Rutherford B.----------Guymon
Morgan, James E.----------Guymon
Oxley, W. N.----------Guymon
Smith, Morris----------Guymon
Wheeler, J. L.----------Texhoma

Tillman County

Allen, Charles Curtis----------Frederick
Bacon, O. G.----------Frederick
Comp, George A.----------Manitou
Fisher, Roy L.----------Frederick
Fry, F. Polk----------Frederick
Fuqua, W. A.----------Grandfield
Horton, J. C.----------Frederick
Short, L. O.----------Frederick
Tallant, George A.----------Frederick

Tulsa County

Adams, George M.----------1419 E 15 Tulsa
Adkins, Jack O.----------Med Arts Bg Tulsa
Allen, C. W.----------1635 E 15 Tulsa

Alston, William C., Jr._____Med Arts Bg Tulsa
Andelman, S. Y._____Utica Sq Med Ctr Tulsa
Anderson, Robert L._____3102 S Harvard Tulsa
Armstrong, O. C._____Med Arts Bg Tulsa
Atchley, R. Q._____Med Arts Bg Tulsa
Atkins, Paul N., Jr._____Braniff Bg Tulsa
Atkins, Paul N., Sr._____Med Arts Bg Tulsa
Bailey, Byron L._____Utica Sq Med Ctr Tulsa
Barham, J. H._____Daniels Bg Tulsa
Bate, Charles J._____352½ N Greenwood Tulsa
Benton, Paul C._____Box 4014 Tulsa
Benzing, William M._____Med Arts Bg Tulsa
Berg, Milton Louis_____3505 S Peoria Tulsa
Bischoff, Paul A._____604 S Cinn Tulsa
Black, Harold J._____Med Arts Bg Tulsa
Blankenship, John F._____6423 E Archer Tulsa
Blocksom, Berget H._____Med Arts Bg Tulsa
Boone, Wilmot B._____4117 S 26 W Ave Tulsa
Boyd, H. L._____Braniff Bg Tulsa
Boyer, William F._____604 S Cinn Tulsa
Bradfield, S. J._____Med Arts Bg Tulsa
Brawner, Donald L._____Med Arts Bg Tulsa
Brighton, Charles E._____604 S Cinn Tulsa
Brocksmith, Henry A._____3102 S Harvard Tulsa
Brogden, J. C._____Med Arts Bg Tulsa
Brookshire, J. E._____Ritz Bg Tulsa
Brown, Manuel_____1619 E 15 Tulsa
Brown, Walter E._____2020 S Xanthus Tulsa
Browne, Henry S._____Med Arts Bg Tulsa
Brumfield, Thomas J._____6626 E King Tulsa
Bryan, W. J., Jr._____Med Arts Bg Tulsa
Bryant, R. W._____
_____Ochsner Foundation Hosp New Orleans, La.
Buchan, William H._____Braniff Bg Tulsa
Bungardt, Alfred H._____Med Arts Bg Tulsa
Burns, Dixon N._____Utica Sq Med Ctr Tulsa
Caldwell, Charles L._____115 E 18 Tulsa
Calhoun, C. E._____Sand Springs
Calhoun, W. H._____5323 S Lewis Tulsa
Capehart, John D._____814 N Osage Dr Tulsa
Capehart, Maurice P._____1635 E 15 Tulsa
Capehart, Samuel A._____543 E Apache Tulsa
Carney, A. B._____915 S Cinn Tulsa
Cash, Murray M._____Med Arts Bg Tulsa
Childers, Emil M._____Utica Sq Med Ctr Tulsa
Childs, J. W._____1616 S Madison Tulsa
Clinton, Fred S._____230 E Woodward Blv Tulsa
Clopton, James W._____213 N Pamona Fullerton, Cal.
Cohen, Eugene S._____Med Arts Bg Tulsa
Cohenour, Howard M._____Med Arts Bg Tulsa
Conrad, Betty Louise_____602 S Cheyenne Tulsa
Cook, William Albert_____Mayo Hotel Tulsa
Coulter, T. B._____1346 S Norfolk Tulsa
Covington, Terrell, Jr._____3102 S Harvard Tulsa
Craig, Paul E._____2732 E 15 Tulsa
Crane, Donald V._____Med Arts Bg Tulsa
Crawford, William S._____Natl Bk of Tulsa Bg Tulsa
Cronk, Gerald E._____2020 S Xanthus Tulsa
Cronk, Robert T._____2020 S Xanthus Tulsa
Dague, John C._____Utica Sq Med Ctr Tulsa
Daily, R. E._____Bixby
Davis, A. H._____Med Arts Bg Tulsa
Davis, George M._____Bixby
Davis, Thomas H._____2020 S Xanthus Tulsa
Dean, W. A._____Med Arts Bg Tulsa
Devine, J. C._____6336 E Admiral Pl Tulsa
Dillman, Robert E._____Med Arts Bg Tulsa
Dillman, Theodore Erman_____Med Arts Bg Tulsa
Docter, Charles W._____1916 S Utica Tulsa
Dodd, Nevin W._____1307 E 35 Tulsa
Dolan, Gladys K._____2532 S Harvard Tulsa
Donovan, Mark H._____Utica Sq Med Ctr Tulsa
Eads, C. H._____Med Arts Bg Tulsa
Evans, Hugh J._____Med Arts Bg Tulsa
Echols, Raymond S._____Military Service
Edwards, D. L._____Utica Sq Med Ctr Tulsa
Etherton, Monte C._____2423 E Admiral Blv Tulsa
Ewell, William C._____1211 S Harvard Tulsa
Fair, Thomas H._____604 S Cinn Tulsa
Fehlman, Bernard F., Jr._____Military Service
First, Safety R._____Med Arts Bg Tulsa
Flack, F. L._____3102 S Harvard Tulsa
Flanigin, H. F._____1635 E 15 Tulsa
Ford, H. W._____915 S Cinn Tulsa
Forrest, H. J._____1419 E 15 Tulsa
Forry, W. W._____Bixby
Franklin, Onis_____Broken Arrow
Franklin, S. E._____1619 E 15 Tulsa
Fulcher, Joseph_____1151 S Peoria Tulsa
Funk, Robert E._____3102 S Harvard Tulsa
Gaddis, John W._____1530 S Peoria Tulsa
Gaddis, Newell C._____1530 S Peoria Tulsa
Galindo, D. L._____1923 S Utica Tulsa
Garrett, D. L._____Med Arts Bg Tulsa
Gastineau, F. T._____Med Arts Bg Tulsa
Glass, Fred A._____2020 S Xanthus Tulsa
Goddard, Roy K., Jr._____PO Box 801 Tulsa
Goen, R. W._____Braniff Bg Tulsa
Goldberg, Jed E._____Utica Sq Med Ctr Tulsa
Goodman, Samuel_____Med Arts Bg Tulsa
Gorrell, Ben F._____Med Arts Bg Tulsa
Gorrell, J. F._____Med Arts Bg Tulsa
Graham, Hugh C._____Utica Sq Med Ctr Tulsa
Graham, Mary V._____1306 E 35 Tulsa
Gray, John F., Jr._____Utica Sq Med Ctr Tulsa
Gross, Worth M._____Med Arts Bg Tulsa
Grosshart, Paul_____2203 E 24 Tulsa
Grubb, Robert D._____1306 E 35 Tulsa
Guild, Carl H._____1419 E 15 Tulsa
Hale, Arthur E._____2020 S Xanthus Tulsa
Hall, G. H._____15 W Third Tulsa
Haney, T. Paul_____521 N Boulder Tulsa
Hardman, Thomas J._____Utic Sq Med Ctr Tulsa
Hardy, Homer D., Jr._____4116 S 25 W Ave Tulsa
Harris, Bunn_____Jenks
Hart, Marshall O._____1228 S Boulder Tulsa
Hartig, Clemens M._____Utica Sq Med Ctr Tulsa
Hayne, Robert A._____Military Service
Hays, Luvern_____2445 E 27 Pl Tulsa
Heerwagen, Paul K., Jr._____Collinsville
Henderson, F. W._____2541 E 11 Pl Tulsa
Henderson, William N._____Military Service
Henley, Marvin D._____Med Arts Bg Tulsa
Henry, Gifford H._____3102 S Harvard Tulsa
Hidy, W. Dean_____1321 S Main Tulsa
Hill, O. L._____915 S Cinn Tulsa
Hoke, Clarence C._____1615 Ames Winfield, Kan.
Hoover, W. D._____Stanolind Bg Tulsa
Hotz, Carl J. H._____604 S Cinn Tulsa
Huber, W. A._____Med Arts Bg Tulsa
Hudson, David V._____521 N Boulder Tulsa
Hudson, Margaret G._____1759 S Victor Tulsa
Humphrey, B. H._____Sperry
Hyatt, E. G._____604 S Cinn Tulsa
Ihrig, H. Kenneth_____1701 E 19 Tulsa
Imler, Robert L._____Utica Sq Med Ctr Tulsa
Jacobs, William S._____3102 S Harvard Tulsa
Johnson, E. O._____Med Arts Bg Tulsa
Johnson, Maxwell A._____Med Arts Bg Tulsa
Johnson, R. Chadwick_____Sand Springs
Johnson, Robert H._____2020 S Xanthus Tulsa
Jones, Craig S._____915 S Cinn Tulsa

Kelley, James W._____Utica Sq Med Ctr Tulsa
Kemmerly, H. P._____1419 E 15 Tulsa
Kerekes, Ernest S._____Utica Sq Med Ctr Tulsa
Ketchum, Hall_____Utica Sq Med Ctr Tulsa
Kishner, L. L._____Military Service
Kornblee, A. T._____Med Arts Bg Tulsa
Kramer, Allen C._____1547 S Lewis Tulsa
Kreitmeyer, George R._____1916 S Utica Tulsa
Larrabee, W. S._____Med Arts Bg Tulsa
Layton, O. E._____Collinsville
Ledbetter, Marion K._____1453 S Quaker Tulsa
Lee, J. K._____3102 S Harvard Tulsa
Lee, Otis S._____Utica Sq Med Ctr Tulsa
Leibovitz, Martin_____Med Arts Bg Tulsa
Lewis, Ceylon S._____Med Arts Bg Tulsa
Lhevine, Dave B._____Med Arts Bg Tulsa
Lhevine, Morris B._____1602 S Madison Tulsa
Lindstrom, W. Carl_____Utic Sq Med Ctr Tulsa
Loney, W. R. R._____Med Arts Bg Tulsa
Lowbeer, Leo_____1653 E 12 Tulsa
Lowe, J. O._____Thompson Bg Tulsa
Lubin, E. N._____Med Arts Bg Tulsa
Lubin, Robert I._____Univ of Iowa Hosp Iowa City, Ia.
Lucas, Boyd V._____Med Arts Bg Tulsa
Lusk, Earl M._____915 S Cinn Tulsa
Lynch, Thomas J._____2132 E 24 Tulsa
Lyons, Mason R._____Turley
MacDonald, Daniel M._____Utica Sq Med Ctr Tulsa
Margolin, Berthe_____2739 E 22 Tulsa
Markland, James D._____Med Arts Bg Tulsa
Martin, Ralph F._____Sand Springs
Matt, John G._____Med Arts Bg Tulsa
Mauritson, Donald F._____Utica Sq Med Ctr Tulsa
McCrary, Robert F._____City Hosp St. Louis, Mo.
McDonald, John E._____Utica Sq Med Ctr Tulsa
McDowell, Richard E._____222 E Fifth Tulsa
McDowell, Thomas A._____Med Arts Bg Tulsa
McGill, Ralph A._____Utica Sq Med Ctr Tulsa
McGraw, W. L._____1332 S Lewis Tulsa
McShane, William R._____Utica Sq Med Ctr Tulsa
Meyers, William A._____2000 N Memorial Dr Tulsa
Michols, Raymond M._____Utica Sq Med Ctr Tulsa
Miller, George H._____Atlas Life Bg Tulsa
Miller, Loren V._____3102 S Harvard Tulsa
Mishler, D. L._____604 S Cinn Tulsa
Mitchell, Tom Hall_____Natl Bk of Tulsa Bg Tulsa
Mohrman, S. S._____5500 S Peoria Tulsa
Moore, Edward L._____Utica Sq Med Ctr Tulsa
Moore, Matthew B._____Utica Sq Med Ctr Tulsa
Morgan, Carl C._____2010 S Utica Tulsa
Mount, Houston F._____3102 S Harvard Tulsa
Mulmed, Earl I._____Utica Sq Med Ctr Tulsa
Munding, Linus A._____Utica Sq Med Ctr Tulsa
Murdock, H. D._____Med Arts Bg Tulsa
Murray, Silas_____211 Sunset Dr Tulsa
Nathan, Robert E._____Med Arts Bg Tulsa
Neal, James H., Jr._____915 S Cinn Tulsa
Neal, James H., Sr._____521 N Boulder Tulsa
Nelson, F. J._____2020 S Xanthus Tulsa
Nelson, F. L._____2303 E Third Tulsa
Nelson, Iron H._____Med Arts Bg Tulsa
Nelson, M. O._____Med Arts Bg Tulsa
Nesbitt, P. P._____1565 Swan Dr Tulsa
Newlin, W. H._____Broken Arrow
Nicholas, Hugh B._____Military Service
Nienhuis, Lester I._____Utica Sq Med Ctr Tulsa
Northrup, L. C._____1307 S Main Tulsa
Northrup, Robert A._____1307 S Main Tulsa
O'Meilia, W. J._____Braniff Bg Tulsa
Orr, Herbert S._____1645 E 15 Tulsa
Osher, William J._____Med Arts Bg Tulsa
Ozment, Thomas L._____604 S Cinn Tulsa
Palik, Emil E._____1923 S Utica Tulsa
Park, Felix R._____Med Arts Bg Tulsa
Parmenter, D. C._____1204 S Cheyenne Tulsa
Pascucci, Lucien M._____Utica Sq Med Ctr Tulsa
Pavy, C. A._____Med Arts Bg Tulsa
Peden, James C._____Med Arts Bg Tulsa
Perry, Daniel L._____805 S Gary Tulsa
Perry, Fred_____Braniff Bg Tulsa
Perry, Hugh_____222 E Fifth Tulsa
Perry, John C._____Med Arts Bg Tulsa
Perryman, Robert G._____2020 S Xanthus Tulsa
Peters, James C._____915 S Cinn Tulsa
Peters, Myra Ann_____Med Arts Bg Tulsa
Pigford, R. C._____2427 E 26 Tulsa
Pollack, Simon_____Utica Sq Med Ctr Tulsa
Porter, Horace H._____1419 E 15 Tulsa
Pratt, Wm. C._____604 S Cinn Tulsa
Presson, L. C._____1948 N Main Tulsa
Ray, R. G._____3015 E 15 Tulsa
Reese, K. C._____Utica Sq Med Ctr Tulsa
Reynolds, Ernest W., Jr._____Univ Hosp Ann Arbor, Mich
Reynolds, Ernest W., Sr._____1307 S Main Tulsa
Reynolds, James L._____1516 N Cinn Tulsa
Rhine, J. Richard_____Turley
Rhodes, Robert E. Lee_____2220 S St Louis Tulsa
Richardson, Jack Leahy_____1916 S Utica Tulsa
Richey, Sidney M._____4748 S 33 Way Tulsa
(Member Pontotoc)
Riley, Noland C._____Military Service
Roberts, T. R._____Wright Bg Tulsa
Robertson, Gerald G._____1324 E 50 Tulsa
Rogers, J. W._____1327 E 27 Tulsa
Rubin, H. J._____1916 S Utica Tulsa
Ruprecht, H. A._____604 S Cinn Tulsa
Russell, G. R._____604 S Cinn Tulsa
Salamy, Joseph_____2523 E 11 Tulsa
Sanger, Walter B._____Med Arts Bg Tulsa
Schreck, Philip M._____Med Arts Bg Tulsa
Searle, M. J._____Med Arts Bg Tulsa
Sethney, Walter F._____2828 E 15 Tulsa
Shackelford, Paul O._____Military Service
Shapard, Edwin R._____Utica Sq Med Ctr Tulsa
Shapiro, David_____1129 E 15 Tulsa
Shepard, R. M._____Med Arts Bg Tulsa
Shepard, Robert M., Jr._____Med Arts Bg Tulsa
Shepard, S. C._____Utica Sq Med Ctr Tulsa
Sherwood, R. G._____14 Court Arcade Tulsa
Shipp, J. D._____Med Arts Bg Tulsa
Showman, W. A._____Med Arts Bg Tulsa
Sinclair, Franklin D._____Utica Sq Med Ctr Tulsa
Sippel, Mary Edna_____Utica Sq Med Ctr Tulsa
Sisler, Wade_____807 S Elgin Tulsa
Smith, D. O._____604 S Cinn Tulsa
Smith, Ruric N._____Med Arts Bg Tulsa
Smith, Wendell L._____2431 E Admiral Tulsa
Smith, W. O._____Utica Sq Med Ctr Tulsa
Spann, Joe L._____Utica Sq Med Ctr Tulsa
Spann, Logan A._____Braniff Bg Tulsa
Spencer, Hugh B._____2828 E 15 Tulsa
Springer, M. P._____118 E Sixth Tulsa
Stanley, Mote V._____1632 E 15 Tulsa
Steel, Marcella R._____1356 E 27 Pl Tulsa
Steele, Byron W., Jr._____Utica Sq Med Ctr Tulsa
Stevenson, James_____Med Arts Bg Tulsa
Stewart, H. Boyd_____2500 E 27 Pl Tulsa
Stokes, E. M._____1415 E 15 Tulsa
Stokes, Lowell L._____1321 S Main Tulsa
Stowell, Averill_____1151 S Peoria Tulsa
Strong, Paul T._____2020 S Xanthus Tulsa
Stuard, Charles G._____Utica Sq Med Ctr Tulsa

Stuart, Frank A.----Utica Sq Med Ctr Tulsa
Stuart, Leon H.----Med Arts Bg Tulsa
Stuart, Royal E.----Utica Sq Med Ctr Tulsa
Summers, C. S.----Daniels Bg Tulsa
Sundgren, Vincel----604 S Cinn Tulsa
Swanson, K. F.----604 S Cinn Tulsa
Taylor, Thomas W.----915 S Cinn Tulsa
Templin, O. E.----1240 E 30 Tulsa
(Member Woods)
Thomas, Harlan----Med Arts Bg Tulsa
Thomas, William F., Jr.----Utica Sq Med Ctr Tulsa
Thompson, James Barrett----Med Arts Bg Tulsa
Thompson, Lawrence E.----1918 N Oxford Tulsa
Thompson, Oliver H.----3102 S Harvard Tulsa
Tompkins, R. G.----Med Arts Bg Tulsa
Trainor, William J.----
----680 N. Walnut Wilmington, Ohio
Turnbow, W. R.----3015 E 15 Tulsa
Turnbull, Theodore----222 E Fifth Tulsa
Turner, Samuel R.----1419 E 15 Tulsa
Turner, Thomas R.----604 S Cinn Tulsa
Tyler, Joe E.----604 S Cinn Tulsa
Underwood, David J.----Utica Sq Med Ctr Tulsa
Underwood, F. L.----Med Arts Bg Tulsa
Ungerman, A. H.----Med Arts Bg Tulsa
Ungerman, Milford S.----Med Arts Bg Tulsa
Vammen, Adolph N.----1415 E 15 Tulsa
Wadsworth, R. M.----1443 S Quaker Tulsa
Walker, Dean C.----604 S Cinn Tulsa
Walker, Roscoe----2521 E 34 Tulsa
(Member Osage)
Walker, Wm. A.----1215 S Utica Tulsa
Wallace, Albert W.----604 S Cinn Tulsa
Wappler, F. A.----2010 S Utica Tulsa
Ward, Benjamin W.----1916 S Utica Tulsa
Waters, William A.----6622 E King Tulsa
Webb, J. Warner, Jr.--Med Dept Amer Airlines Tulsa
White, Eric M.----Med Arts Bg Tulsa
White, Harold A.----Med Arts Bg Tulsa
White, James W.----3102 S Harvard Tulsa
White, N. S.----Med Arts Bg Tulsa
Wilbanks, Charles E.----727 N Lewis Tulsa
Wiley, A. Ray----Med Arts Bg Tulsa
Williams, Richard G.----1645 E 15 Tulsa
Williams, Theo S.----Med Arts Bg Tulsa
Wilner, Sol----Med Arts Bg Tulsa
Witcher, R. B.----Med Arts Bg Tulsa
Wolff, Eugene G.----2010 S Utica Tulsa
Woodson, Fred E.----Med Arts Bg Tulsa
Wright, Kenneth L., Jr.----
----Ochsner Clinic New Orleans, La.
Yandell, Hays R.----2020 S Xanthus Tulsa

Wagoner County

Divine, D. G.----Wagoner
Riddle, H. K.----Coweta
Tuttle, Howard D.----Wagoner

Washington County

Aldredge, Wm. M.----Union Ntal Bk Bg Bartlesville
Allen, Robert G.----412 E 2nd Bartlesville
Allen, Virginia Shipman--1815 S View Dr Bartlesville
Amen, Alvin M.----410 E 2nd Bartlesville
Athey, J. V.----521 S Cherokee Bartlesville
Beechwood, E. E.----Med Ctr Bartlesville
Bogan, R. J.----Union Natl Bk Bg Bartlesville
Chamberlain, Elizabeth----1316 Cherokee Bartlesville
Davis, Kieffer----Adams Bg Bartlesville
Denyer, Hillard E.----416 E 2nd Bartlesville
Eslick, Ralph L.----410 E Frank Phillips Bartlesville
Etter, F. S.----Union Natl Bk Bg Bartlesville
Gentry, R. C.----Union Natl Bk Bg Bartlesville
Green, Otto I.----Union Natl Bk Bg Bartlesville
Hudson, L. D.----Dewey
Huntington, Camp S.----Adams Bg Bartlesville
Johnson, C. L.----421 S Cherokee Bartlesville
Lawrence, Forrest C.----Med Ctr Bartlesville
LeBlanc, William----Ochelata
Lindsay, J. H.----Dewey
Lockard, Vernon M.--500 E Frank Phillips Bartlesville
Mery, Albert M.----345 Boston SE Bartlesville
Norman, Earl T.----Phillips Petroleum Co Bartlesville
Pittman, Cole D.----303½ Johnstone Bartlesville
Rewerts, F. C.----First Natl Bk Bg Bartlesville
Scott, John E.----421 S Cherokee Bartlesville
Shipman, William H.----922 Cherokee Bartlesville
Smith, Joseph G.----319 Dewey Bartlesville
Somerville, O. S.----412 E 5th Bartlesville
Torrey, J. P.----1211 Keeler Bartlesville
Tulloch, George M.----Med Ctr Bartlesville
Vansant, J. P.----Dewey
Wallingford, F. C.----Military Service
Wells, Thomas----Union Ntal Bk Bg Bartlesville
Westbrook, Brock R., Jr. Union Natl Bk Bg Bartlesville
Word, Lee B.----420 E 2nd Bartlesville

Woshito County

Anderson, Roy W.----Cordell
Bungardt, Alfred Hiram----Cordell
Hannas, R. R., Jr.----Sentinel
Jones, John Paul----Dill City
Jones, S. Tisdal----Cordell
Livingston, L. G.----Cordell
Stowers, Aubrey E.----Sentinel

Woods County

Benjegerdes, Theodore D.----Alva
Ensor, Daniel B.----Alva
Grantham, Elizabeth----Alva
Hinkle, Alfred B.----Alva
LaFon, William F.----Military Service
Peacher, Kenneth Lee----Military Service
Simon, John F.----Alva
Stephenson, I. F.----Alva
Traverse, C. A.----Alva
Whiteneck, Rhonald A.----Waynoka

Woodword County

Adelman, Frank L.----Fort Supply
Anderson, Paul S.----Fort Supply
Braly, Berton Edward----Woodward
Braly, M. K.----Woodward
Cobb, N. E.----Mooreland
Day, John L.----Woodward
Duer, Joe L.----Woodward
England, Myron----Woodward
Fetzer, Jack D.----Woodward
Flack, Frank E.----Woodward
Hunt, Davis T.----Mooreland
Johnson, H. L.----Woodward
Obermiller, R. G.----Woodward
Pierson, Orra A.----Woodward
Snow, Otis E.----Fort Supply
Tedrowe, C. W.----Woodward
Triplett, T. Burke----Mooreland
Vloedman, Derk A.----Woodward
Williams, C. E.----Woodward

Oklahoma State Medical Association

Officers 1954-1955

1227 Clossen Drive | Telephone REgent 9-1648 | Oklahomo City, Oklahomo

PRESIDENT

Bruce R. Hinson, M.D.----------Enid

PRESIDENT-ELECT

R. Q. Goodwin, M.D.----------Oklahoma City

VICE-PRESIDENT

Clifford M. Bassett, M.D.----------Cushing

SECRETARY-TREASURER

W. W. Rucks, Jr., M.D.----------Oklahoma City

DELEGATES TO AMERICAN MEDICAL ASSOCIATION

James Stevenson, M.D.----------Tulsa
John F. Burton, M.D.----------Oklahoma City

ALTERNATE DELEGATES TO AMERICAN MEDICAL ASSOCIATION

E. H. Shuller, M.D.----------McAlester
Malcolm E. Phelps, M.D.----------El Reno

SPEAKER OF THE HOUSE OF DELEGATES

Clinton Gallaher, M.D.----------Shawnee

VICE-SPEAKER OF THE HOUSE OF DELEGATES

W. Keiller Haynie, M.D.----------Durant

Executive Secretary
Dick Graham

Associate Executive Secretary
John K. Hart

GENERAL COUNSEL

Lytle, Johnston and Soule
Commerce Exchange Building—Oklahoma City

COUNCIL

District No. 1: Craig, Delaware, Mayes, Nowata, Ottawa, Rogers, Washington

Councilor (1956))__Forrest S. Etter, M.D., Bartlesville
Vice-Councilor (1956)__John E. Highland, M.D., Miami

District No. 2: Kay, Noble, Osage, Pawnee, Payne

Councilor (1957)_____E. C. Mohler, M.D., Ponca City
Vice-Councilor (1957)____Glen W. McDonald, M.D., Pawhuska

District No. 3: Garfield, Grant, Kingfisher, Logan

Councilor (1955)____C. M. Hodgson, M.D., Kingfisher
Vice-Councilor (1955)____Wm. P. Neilson, M.D., Enid

District No. 4: Alfalfa, Beaver, Cimarron, Ellis, Harper, Major, Texas, Woods, Woodward

Councilor (1956)_____Joe L. Duer, M.D., Woodward
Vice-Councilor (1956)—Vacant

District No. 5: Beckham, Blaine, Canadian, Custer, Dewey, Roger-Mills

Councilor (1957)_____A. L. Johnson, M.D., El Reno
Vice-Councilor (1957)____Ross Deputy, M.D., Clinton

District No. 6: Oklahoma

Councilor (1955)__Elmer Ridgeway, M.D., Okla. City
Vice-Councilor (1955)_ P. E. Russo, M.D., Okla. City

District No. 7: Cleveland, Creek, Lincoln, Okfuskee, Pottawatomie, Seminole

Councilor (1956)_____Paul Gallaher, M.D., Shawnee
Vice-Councilor (1956)__Charles Smith, M.D., Norman

District No. 8: Tulsa

Councilor (1957)_____Wilkie D. Hoover, M.D., Tulsa
Vice-Councilor (1957)__Wendell L. Smith, M.D., Tulsa

District No. 9: Adair, Cherokee, McIntosh, Muskogee, Okmulgee, Sequoyah, Wagoner

Councilor (1955)_ Francis R. First, Jr., M.D., Checotah
Vice-Councilor (1955)_____I. W. Bollinger, M.D., Henryetta

District No. 10: Haskell, Hughes, Latimer, LeFlore, Pittsburg

Councilor (1956)_____Paul Kernek, M.D., Holdenville
Vice-Councilor (1956)__C. D. Lively, M.D., McAlester

District No. 11: Atoka, Bryan, Choctaw, Coal, McCurtain, Pushmataha

Councilor (1957)_____A. T. Baker, M.D., Durant
Vice-Councilor (1957)__Thomas E. Thea, M.D., Idabel

District No. 12: Carter, Garvin, Johnston, Love, Marshall, McClain, Murray, Pontotoc

Councilor (1955)__J. Hobson Veazey, M.D., Ardmore
Vice-Councilor (1955)_____William T. Gill, M.D., Ada

District No. 13: Caddo, Comanche, Cotton, Grady, Jefferson, Stephens

Councilor (1956)_____H. M. McClure, M.D., Chickasha
Vice-Councilor (1956)__John B. Miles, M.D., Anadarko

District No. 14: Greer, Harmon, Jackson, Kiowa, Tillman, Washita

Councilor (1957)_____J. B. Hollis, M.D., Mangum
Vice-Councilor (1957)__R. R. Hannas, M.D., Sentinel

Oklahoma State Medical Association

Constitution and By-Laws

Constitution

ARTICLE I
Title

The name of this organization is the OKLAHOMA STATE MEDICAL ASSOCIATION, INCORPORATED.

ARTICLE II
Purpose of the Association

This Association is formed to promote the science and art of medicine.

ARTICLE III
Component Societies

The membership of the Association shall be organized into county medical societies and/or district medical societies, as circumstances may direct and as the Association may determine. The name and function of each society and its relations to the Association shall be defined in a charter issued by the Association, subject to amendment and revocation by the Association in accordance with such terms as may be prescribed in the By-Laws of the Association.

ARTICLE IV
Membership

Membership in this Association shall be considered a privilege and not a right. The membership of this Association shall be comprised of all members in good standing of its component societies as indicated by the membership records of the Association.

ARTICLE V
House of Delegates

Section 1. The House of Delegates shall be composed of: (1) Delegates elected by the component county and or district societies of the Association, (2) The officers of the Association enumerated in ARTICLE VIII, Section 1, of this Constitution, and (3) The Oklahoma Delegates to the American Medical Association.

Section 2. All legislative powers of the Association reside in the House of Delegates which alone shall have authority to determine the policies of the Association. The House of Delegates shall transact all business of the Association, directly or through agencies or agents created by it, the transaction of which is not vested by this Constitution in any other agency. The House of Delegates shall elect the general officers of the Association.

Section 3. The House of Delegates shall provide for a division of the scientific work of the Association into such sections or departments as, in the judgment of the House, will best promote the scientific and professional activities of the Association.

Section 4. The House of Delegates may provide for the organization of such Councilor District Societies as, in its judgment, will promote the best interests of the profession, but the membership of any such society shall be limited to members of the component county societies of which it is made up.

Section 5. The House of Delegates shall divide the state into Councilor Districts specifying which county or counties shall be in each district.

ARTICLE VI
The Council

Section 1. The Council shall consist of one Councilor elected from each Councilor District, the President, President - Elect, Secretary - Treasurer and Speaker of the House of Delegates of the Association.

Section 2. The Council shall be the Executive Board of this Association and shall carry out the mandates and policies of the Association which are determined by the House of Delegates. The Council shall have supervision and control of the finances and particularly the expenditures of the Association, the investment of its funds and the direction and control of its property.

Section 3. The Council shall meet at least once during the annual session, and on call by the President between annual sessions of the Association on his own initiative or by petition to the President by at least one-third of the members of the Council.

ARTICLE VII
Sessions and Meetings

Section 1. The Association shall hold an annual session at such a place as shall be determined by the House of Delegates. For good and sufficient reason, the annual meeting place may be changed by a three-fourths vote of the Council.

Section 2. During the annual session there shall be held (1) at least one general meeting open to all registered members and guests, (2) at least one meeting of the House of Delegates, and (3) at least one meeting of the Council.

Section 3. The Council, by a vote of two-thirds of its entire membership may call a special meeting of the House of Delegates, and upon petition by thirty (30) or more delegates, the speaker of the House of Delegates or the President of the Association shall call such a meeting. At any such meeting, no business shall be transacted except that specified in the call.

ARTICLE VIII
General Officers

Section 1. The general officers of the Association shall be President, President-Elect, Vice President, Secretary-Treasurer, Speaker and Vice-Speaker of the House of Delegates, and the number of Councilors and Vice-Councilors as fixed by the House of Delegates.

Section 2. The President-Elect and Vice President shall be elected for a term of one year; the Secretary-Treasurer, Speaker of the House of Delegates and Vice-Speaker of the House of Delegates for two years; and the Councilors and Vice-Councilors for three years, the Councilors being divided into classes so that approximately one-third of the Councilors shall be elected each year. The President-Elect shall become President for a term of one year upon the expiration of his term as President-Elect.

Section 3. All of the above officers shall assume the duties of their respective offices immediately

upon the close of the annual session at which they were elected to serve and shall serve until their successors have been elected and installed.

Section 4. Vacancies created by the death, resignation or removal of the above named officers shall be filled by temporary appointment by the President being effective until the next annual meeting of the House of Delegates which shall elect a successor to complete the unexpired term, if any, except the President, whose place shall be filled by the Vice-President, and the Speaker of the House of Delegates, whose unexpired term shall be filled by the Vice-Speaker and Councilors, whose terms shall be completed by their respective Vice-Councilors.

ARTICLE IX
Finances

Section 1. Funds for conducting the affairs of the Association may be raised (1) by such special assessments on and/or annual dues from members of this Association as the House of Delegates determines advisable, provided that such assessments and dues, with respect to its members, shall be collected by each component county and/or district society and forwarded by its secretary to this Association, (2) by voluntary contributions requested by resolution, and (3) in any other manner approved by the House of Delegates.

Section 2. The Council shall, at the annual session submit a budget to the House of Delegates for its approval, detailing the financial needs of the Association for the ensuing year. The House of Delegates, if it approves the budget, shall make such appropriations as are called for therein.

ARTICLE X
Referendum

Section 1. At any session of the House of Delegates, the House may, by a two-thirds vote of its registered members, submit any question to the membership of the Association for its vote. A majority vote of all the members of the Association shall determine the question.

Section 2. The Council shall be in charge of the referendum and may designate an officer of the Association or a Committee to canvass the vote and announce the results.

ARTICLE XI
Seal

The Association shall have a common seal. The power to change or renew the seal shall rest with the House of Delegates.

ARTICLE XII
Ethics

The Principles of Medical Ethics of the American Medical Association in force at the time of the adoption of this Constitution, and as they may from time to time thereafter be amended by the American Medical Association, shall be accepted as the Principles of Medical Ethics of the Oklahoma State Medical Association and shall be binding on its members and on its component county and/or district societies.

ARTICLE XIII
Amendments

The House of Delegates may amend any article of this Constitution or any section or part thereof by a two-thirds vote of the Delegates registered at any Annual Session, provided that copies of the proposed amendment be sent with notices to the various component societies at least sixty (60) days before the Annual Meeting, and that the proposed amendments be published at least once during the year in the Journal, and that no such amendments become effective until the close of the Annual Session.

ARTICLE XIV

This Constitution supersedes and repeals all previous Constitutions. All By-Laws, resolutions and enactments in conflict herewith are declared to be of no effect.

(Constitution Adopted 1940)
(As Amended Through 1954)

By-Laws

CHAPTER I—Membership
Section 1. Eligibility

All members in good standing of the component societies of this Association, as indicated by the membership records of this Association, are members of this Association. However, a component society shall admit to membership only such a person as is a citizen of the United States, possesses the degree of Doctor of Medicine or a foreign degree in medicine regarded by the Council of the Association as equivalent thereto-and in addition, has been licensed to practice medicine and surgery by the Oklahoma State Board of Medical Examiners, and whose Federal narcotics permit has not been revoked nor surrendered nor the issuance of such a permit denied, because of proved violations of State or Federal narcotics laws, provided, however, that any Doctor of Medicine whose narcotics permit has been revoked or surrendered or the issuance thereof denied may make application for membership when such narcotics permit has been reissued for a year or more at the time of such application.

(a) Any physician who is associated with the Armed Forces, Veterans Administration, or the United States Public Health Service and who does not possess a license to practice medicine in the State of Oklahoma but who otherwise meets the qualifications for membership may be elected to membership by a County Medical Society, but may not hold office or be a member of the House of Delegates.

Section 2. Rights

(a) Only members of this Association who are in good standing will be entitled to any of the rights, benefits and privileges of the Association, including the right to register at the annual session of the Association. The presence of a physician's name on the official roster of the Association, after it has been properly reported to the Executive Secretary of this Association by the Secretary of his county and/or district society, shall be prima facie evidence of membership, good standing, and the right to register at an annual session. No member shall take part in any of the proceedings of the annual session until he has registered.

(b) All members of the component county and or district societies, in good standing and whose dues and assessments in this Association and the American Medical Association have been received from

their component societies, are active members. Only active members are entitled to hold an office in this Association.

(c) Each Councilor District shall have one Councilor and one Vice-Councilor, however, only one vote in the Council will be apportioned to each Councilor District. The Vice-Councilor may vote in the absence of the Councilor without a proxy from the Councilor.

Section 3. Classification

Members of this Association shall be divided into the following classes: active members, life members, honorary members, junior members, associate members, and special service members.

(a) Active Members

Active members shall include all eligible members of component county and/or district societies, providing that their dues and assessments in this Association have been received from component societies.

(b) Honorary Members

Any physician, a member of this Association, who by reason of ill health or age shall retire from the active practice of medicine, or who has been engaged in the active practice of medicine fifty years, or more and whose service to humanity and his profession has been so unusually outstanding as to merit honorary recognition may be placed on the Honorary Membership roll. Eligibility for such consideration is limited to those physicians who have been members of this Association not less than five years immediately preceding application and whose petition for such membership is initiated by a component society of this Association, presented for consideration to the Council, and approved by the Council at a meeting prior to the Annual Session.

The approval of the House of Delegates, by a majority vote thereof at the annual session, shall be necessary to place such eligible members on the Honorary Membership roll. Such members shall have all the privileges of active membership except holding office, and shall not be required to pay dues or assessments in this Association. Honorary Members shall be considered the same as fully-paid members in computing the membership of the County Societies for the purpose of determining the number of Delegates that the County Societies shall be entitled to send to the House of Delegates as provided by these By-Laws.

(c) Life Members

Any physician, a member of this Association who by reason of ill health or age shall retire from the active practice of medicine and who the County Society believes does not fall in the category to be considered as an Honorary Member (or who is, in the judgment of his County Medical Society, impaired by reason of physical disability or age from conducting a sufficiently active practice to pay dues and assessments, without undue hardship, or who has been engaged in the active practice of medicine fifty years, or more) may be placed on the Life Membership roll. Eligibility for such consideration is limited to those physicians who have been members of this Association for not less than the preceding five years and whose petition for such membership is initiated by a component society of this Association, presented for consideration to the Council, and approved by the Council at a meeting prior to the Annual Session.

The approval of the House of Delegates, by a majority vote thereof at the annual session, shall be necessary to place such eligible members on the Life Membership roll. Such members shall have all the privileges of active membership except holding office, and shall not be required to pay dues or assessments in this Association. Life Members shall be considered the same as fully-paid members in computing the membership of the County Societies for the purpose of determining the number of Delegates that the County Societies shall be entitled to send to the House of Delegates as provided in these By-Laws.

(d) Junior Members

Physicians serving as interns or residents on full time shall be entitled to Junior Membership in the component county and/or district societies, and in this Association. No dues shall be assessed such members and they shall be entitled to all privileges of membership except holding office. Privilege of holding Junior Membership in this Association shall be limited to the period of hospital training. Such memberships shall not be considered in the computation of the number of delegates to which a component society is entitled.

(e) Associate Members

The House of Delegates may elect to Associate Membership any person who cannot qualify for either Active, Life, Honorary or Junior Membership, if in the majority opinion of the House of Delegates, his contributions to medicine or the Association justify the conferring of such an honor. Any County Society may place before the House of Delegates petitions for Associate Membership, after having first submitted the petition to the Council before the Annual Meeting and receiving Council approval of the petition.

Petitions for Associate Membership may also originate in the Council.

(f) Special Service Members

Any physician who is in the Armed Forces of the United States, who has been licensed to practice medicine and surgery in Oklahoma, and who has not previously been a member of any county medical society may be recognized as a Special Service Member by this Association. Such physician shall first have been elected to membership as a Special Service Member by a component county society in accordance with the provisions of its Constitution and By-Laws, and the fact of such membership certified to the Executive Secretary of the Association. Special Service membership shall include all rights and privileges of Active Membership except voting and holding office.

No dues shall be assessed such member until the month following his discharge from the Armed Forces of the United States and at which time he shall pay prorated dues for the balance of the year following his discharge from active service. Special Service membership shall lapse at the close of the calendar year following the discharge of each such member from service with the Armed Forces.

Section 4. Membership Requirements

(a) Good Standing

A member who is under sentence of suspension or expulsion from any component society of this Association, or whose name has been dropped from its roll of members, whether as a result of disciplinary action or because of failure to pay dues, is not a member in good standing, within the meaning of this Chapter. This is true even though the defendant or expelled member or the member whose

name has been dropped, has appealed to the Council of the Oklahoma State Medical Association for a review of such action, and his appeal has not yet been acted upon.

(b) Removal from Rolls

The membership in the Oklahoma State Medical Association and any component society of any member whose Federal narcotics permit has been revoked or surrendered because of proved violations of State or Federal narcotics laws shall be automatically terminated, and his name dropped from the membership rolls as of the effective date of such revocation or surrender.

Section 5. Revocotion of Honorory, Associote ond Life Membership

Any Honorary, Associate or Life Membership may be revoked by a two-thirds vote of the House of Delegates when, in the opinion of the House of Delegates, the conduct or actions of the Honorary or Associate Member violates any of the principles of the code of ethics of the Association, or whose conduct or actions are not becoming to the honor conferred.

Section 6. Applicotion Cleorance

Effective September 1, 1947 all Secretaries of County or District Medical Societies shall submit a copy of all applications for membership in the County or District Society to the Executive Office of the Association before final action on the application is taken. The Executive Office will, in turn, within three days, submit the information on said application to the Bureau of Investigation of the A.M.A. for clearance as to the applicant's past history and actions. The report of the Bureau of Investigation and any and all information on hand in the Executive Office shall, in turn, be forwarded within three days after receipt to the Secretary of the County or District Medical Society. The information contained therein will, in turn, be given to the Society's Board of Censors. The Executive Office of the Association shall not record any applicant's application on the records of the Association as a member in good standing unless the procedure outlined above shall have been accomplished. The Executive Office, however, shall have no right to question or decline applications that have followed this procedure if the County or District Society elects the applicant to membership at a regular meeting of the Society wherein a quorum is present.

CHAPTER II—Annuol Session

Section 1. Time ond Ploce

(a) Sometime during the spring of each year, and prior to the Annual Meeting of the American Medical Association, this Association shall hold an annual session, the place to be determined by the House of Delegates, and the time to be designated by a committee composed of the President, President-Elect and Secretary-Treasurer of the Association.

(b) During the annual session, the House of Delegates and the Council shall meet, as hereinafter provided. A general meeting shall be held and the Scientific Assembly shall meet in such sections as may be determined by the Committee on Scientific Work with the approval of the Council.

Section 2. Generol Meeting

General meetings shall be open to all registered members, guests of the Association and may be open to the Public. At the general meeting the President-Elect, who succeeds to the Presidency, shall deliver the President's address in initiation of his incumbency.

Section 3. Scientific Assembly

The Scientific Assembly shall meet in such general and section sessions as may be determined by the Committee on Scientific Work with the approval of the Council.

(a) Section Officers shall be appointed by the Scientific Work Committee and confirmed or rejected by the Council.

Section 4. Popers

No paper shall be presented unless the title be in the hands of the Committee on Scientific Work at least thirty (30) days before the first day of the Annual Meeting. No member may read more than one paper at any Annual Meeting except invited guests, and no paper or address shall occupy more than twenty (20) minutes in its delivery except special addresses by distinguished or invited guests on approval of the Committee on Scientific Work. No member, except by unanimous consent, shall speak more than once in the discussion of any paper nor longer than five minutes at any one time.

(a) Property of Papers

All papers read before this Association shall be its property, and immediately after being read, shall be deposited with the Secretary of the Section or the Executive Secretary of the Association. The authors of such papers shall agree that publication rights are reserved by the Association and except by consent of the Committee on Scientific Work, the authors shall not cause them to be published elsewhere until after they have been published in the Journal, providing, however, that if the Editorial Board of the Journal decides that the paper will not be published in the Journal that the Board may release the paper to the author, for such disposition as he may determine; provided further, that distinguished and invited guests delivering addresses or papers before the Association may reserve the right to use same as they may determine by previous arrangement with the Committee on Scientific Work.

CHAPTER III—House of Delegotes

Section 1. Representotion

Each component county and/or district society shall be entitled to send to the House of Delegates each year one delegate or one alternate to represent that Society in the House of Delegates for each twenty-five (25) fully-paid, Honorary and Life Members, or any fraction thereof, in this Association. The delegates and alternates so elected shall assume office thirty (30) days prior to the next Annual Meeting and the list of delegates and alternates shall be published in the Journal of the Association issued the month previous to the Annual Meeting; provided, however, that each county society shall be entitled to one delegate and one alternate; and further provided that the number of delegates to which each component society is entitled will be based on a roster of its fully paid membership within thirty (30) days of the next annual session; and it is further specially provided that the representation of district societies in the House of Delegates shall be apportioned on the basis of the individual counties comprising such district society, with each county in which five (5) or more members reside being entitled to at least one delegate. In case of counties having less than five members, their members shall be included in the total membership of

the district society, and if the total membership is sufficient to entitle the district society to an additional delegate such additional delegate shall be elected by the district society at large.

Section 2. Meetings and Attendance

(a) Annual Meeting.

The House of Delegates shall meet annually at the time and place of the annual session.

(b) Special Meetings.

The House of Delegates may be called into and convene into special session only under the conditions provided in Article VII, Section 3, of the Constitution.

(c) Registered members at an annual session, and members in good standing present at a special meeting of the House of Delegates shall be permitted to attend such meetings, but except with unanimous consent of the House, only members of committees shall have the privilege of the floor under the circumstances stated in Section 4, subsection (d) of this Chapter. By a majority vote of the House, an executive session may be declared, during which time only qualified delegates will be permitted to attend the meeting.

Section 3. Quorum

A majority of registered and qualified delegates of this Association shall constitute a quorum.

Section 4. Reference Committees

(a) The speaker of the House of Delegates shall appoint, from among its members, reference committees to which reports and resolutions may be referred as may expedite the business of the annual session. Such reference committees shall be limited to three members, and may include those on resolutions, annual reports, place of next annual meeting, tellers and judges of elections, and other such committees as may be expedient.

(b) Delegates to the American Medical Association.

The House of Delegates shall elect delegates and alternates to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body. Such delegates or alternates shall attend the sessions of the American Medical Association. If a delegate or alternate to the House of Delegates of the American Medical Association dies, resigns or fails to qualify, the president, with the approval of a majority of the Council, may select a delegate to serve until the next succeeding or annual session of the House of Delegates of this Association, at which time a successor shall be elected for the unexpired term. Delegates to the American Medical Association shall be elected for a period of two years. The term of each delegate shall begin January 1 following the annual meeting at which time he is elected.

(c) District Societies.

When, in its judgment, the best interests of the Association and the profession will be promoted, thereby, the House of Delegates may organize district societies in any of the councilor districts of which all members of the component societies forming a part thereof shall be members. Likewise, the House of Delegates may disassociate any County Society from a District Society upon petition by a County Society of a District Society.

(d) Committees.

The House of Delegates shall have authority to appoint committees, for special purposes and to authorize the appointment of such committees. Such committee members need not be members of the House of Delegates. They shall report to the House of Delegates and may be present and participate in the debate on the reports but shall not have the power to vote.

(e) Finance.

(1) The House of Delegates shall consider the annual budget of the expense of the Association submitted to it by the Council, and take such action as it deems necessary.

(2) The House of Delegates shall fix each year at the annual session the amount of the per capita dues which each component society and/or district society is to colect from its members and transmit to the Association. The House may also, when it deems it necessary, impose a special assessment on each member of the Association, which likewise it is the duty of the affected component society to collect and transmit to the Association. The House may also accept voluntary contributions or donations for special purposes or the general fund.

Section 5. Order of Business

The following shall be the order of business of the opening and final sessions of the House of Delegates.

(a) Opening Session

(1) Call to order by the Speaker of the House, or the Vice-Speaker or other authorized officer in the absence of the Speaker.

(2) Report of the Credentials Committee, the qualifying of delegates to serve, and determination of the presence of a quorum.

(3) Consideration of minutes of the last session and such special sessions as may have been held succeeding the last annual session.

(4) Nomination of Officers

(5) Appointment of Reference Committees by the Speaker of the House of Delegates.

(6) Reports of Officers

(7) Reports of Standing Committees

(8) Reports of Special Committees

(9) Presentation of Amendments to the Constitution and/or By-Laws.

(10) Submission of invitations for the next annual session.

(11) Unfinished Business.

(12) Miscellaneous and new business.

(13) Recess

(b) Final Session

(1) Roll Call.

(2) Consideration of unfinished business of the preceding session.

(3) Reports of Reference Committees.

(4) Miscellaneous and new business.

(5) Final Consideration of Amendments to By-Laws and further consideration of Amendments to the Constitution.

(6) Election of President-Elect and other Officers whose elections are in order at the session about to be concluded.

(7) Installation of Officers for the ensuing year.

(8) Announcement of Committee appointments by the recently installed President. (President-Elect until this time.)

(9) Unfinished business.

(10) Final adjournment.

The order of business, above detailed, may be modified for any session by a majority of delegates present at that session.

Section 6. Memoriols ond Resolutions

Any memorial or resolution issued in the name of the Oklahoma State Medical Association must be approved by the House of Delegates, except for Resolutions approved by the Council when the House of Delegates is not in session. The House of Delegates shall consider only those memorials and resolutions which have been filed with the Executive Secretary at least thirty (30) days prior to the Session of the House of Delegates at which they are to be considered and which are signed by an active member in good standing of the Association or by the Secretary of a Component Society of the Association on behalf of the Component Society submitting such memorial or resolution. Memorials or resolutions may be referred by the Council to the House of Delegates for consideration by the House of Delegates without the necessity for prior filing as otherwise required by this section, provided, however, that any memorial or resolution to be presented to the Council after the thirty (30) days prior to the Session of the House of Delegates unless originated in and initiated by the Council, must be submitted to the council by a component Society.

CHAPTER IV—Councilor Districts ond Councilors

Section 1. Apportionment

The State of Oklahoma is divided into fourteen (14) Councilor Districts and the counties allotted to each of such districts are as follows:

District No. 1: Craig, Delaware, Mayes, Nowata, Ottawa, Rogers, Washington.
District No. 2: Kay, Noble, Osage, Pawnee, Payne.
District No. 3: Garfield, Grant, Kingfisher, Logan.
District No. 4: Alfalfa, Beaver, Cimarron, Ellis, Harper, Major, Texas, Woods, Woodward.
District No. 5: Beckham, Blaine, Canadian, Custer, Dewey, Roger Mills.
District No. 6: Oklahoma.
District No. 7: Cleveland, Creek, Lincoln, Okfuskee, Pottawatomie, Seminole.
District No. 8: Tulsa.
District No. 9: Adair, Cherokee, McIntosh, Muskogee, Okmulgee, Sequoyah, Wagoner.
District No. 10: Haskell, Hughes, Latimer, LeFlore, Pittsburg.
District No. 11: Atoka, Bryan, Choctaw, Coal, McCurtain, Pushmataha.
District No. 12: Carter, Garvin, Johnston, Love, Marshall, McClain, Murray, Pontotoc.
District No. 13: Caddo, Comanche, Cotton, Grady, Jefferson, Stephens.
District No. 14: Greer, Harmon, Jackson, Kiowa, Tillman, Washita.

Section 2. Term of Councilors

(a) During the Annual session of 1949, Councilors and Vice-Councilors for the districts outlined in Section 1 of this Chapter shall be elected for the following terms:

Districts 1, 4, 7, 10, and 13 for one (1) year.
Districts 2, 5, 8, 11 and 14 for two (2) years.
Districts 3, 6, 9, and 12 for three (3) years.

(b) The terms of office of all Councilors elected after the 1949 Annual Session shall be three (3) years and until their successors are elected and qualified. No Councilor elected after the 1949 Annual session shall be eligible to serve continuously for more than two (2) elective terms. Provided, however; (1) The one and two year elective terms provided for in (a) of this section shall not be considered in the application of this limitation; (2) Service as a Councilor by appointment for completion of an unexpired term shall not be considered in the application of this limitation; (3) This limitation shall apply only to continuous service; (4) Service as Vice Councilor shall not be included in the computation of service as Councilor under this limitation.

Section 3. Chonge of Districts

The House of Delegates, by vote of two-thirds of the delegates present at an Annual session, may change the composition of any one or more of the Councilor Districts.

CHAPTER V—Election of Officers

Section 1. Bollot

All elections shall be by ballot, and a majority of the votes cast shall be necessary to elect. If no nominee receives a majority of the votes cast on the first ballot, the nominee receiving the lowest number of votes on that ballot shall be dropped from the list and a new ballot taken. This procedure shall be continued until one of the nominees receives a majority of all votes cast, when he shall be declared elected. However, if there is only one nominee for an office, a majority vote, without ballot, shall elect.

Section 2. Nominotion

Any member of the House of Delegates shall be permitted to place in nomination for any office, except as herein otherwise provided, the name of any active member of the Oklahoma State Medical Association in good standing. Nomination of officers, councilors and vice-councilors shall be made during the opening session of the House of Delegates as shown in Chapter III, Secton 5, subsection 4 of these By-Laws.

Section 3. Time of Election

Election of officers shall be held at the second meeting of the House of Delegates as provided by Chapter III, Section 5, subsection (b) of these By-Laws.

Section 4. Instollotion

The President-Elect shall assume the duties of President at the close of the next annual session after his election. The delegates to the American Medical Association shall assume office on January 1 following their election. All other officers shall assume office at the close of the Annual session at which they are elected. The terms of office of all officers shall be as herein provided, or until their successors have been elected and qualified.

All retiring officers of this association shall promptly turn over to their successors all papers, records, books, and equipment of their office immediately upon being succeeded.

Section 5. Nominotion of Councilors

One Councilor and one Vice-Councilor is to be elected from each district as hereinbefore provided, however, the delegates from the districts hereinbefore provided shall nominate one or more candidates for councilors and vice-councilors in a district caucus at a recess of the House of Delegates just prior to the nomination of officers, and the one receiving the majority vote of the House of Delegates shall be the Councilor.

CHAPTER VI—Duties of Officers

Section 1. President

The President shall be a member of the Council,

and shall be the Chairman and presiding officer thereof. He shall preside at all general meetings of this Association. He shall fill vacancies on Standing Committees and appoint such special Committees as he deems advisable or under instruction from the Council. He shall be ex officio member of all committees he appoints. He shall be Chairman of the Council and, perform such other duties as pertain to the principal administrative officer as custom and parliamentary usage may require. He shall be the acknowledged head and personal representative of the medical profession of the State during his term of office, and so far as practical, shall visit the districts of the State and assist the Councilors in building up county and/or district societies. Upon invitation of his successor to the presidency or of the Council, he may sit as a member of that body in an advisory capacity for one year succeeding his retirement. As Chairman of the Council, he shall have the right to cast his vote as a Councilor or reserve same to break a tie.

Section 2. Vice-President

In the event of death, resignation, removal from the State, or the disqualification or disability of the President to continue with his duties, the Vice-President shall succeed to the Presidency to complete the unexpired term. In the absence of the President he shall act as Chairman of the Council and preside.

Section 3. President-Elect

At the close of the next annual session following his election, he shall automatically succeed to the Presidency.

Section 4. Speaker of the House of Delegates

The Speaker of the House of Delegates shall be a member of the Council. He shall preside at all meetings of the House of Delegates when present, and in the absence of the Vice-Speaker, may designate any member of the House to preside for him temporarily. He shall appoint such Reference Committees as may be necessary to expedite the business of the annual session, and shall perform such duties as custom and parliamentary usage may require of the presiding officer. During the absence of the President and Vice-President or other cause of vacancy of the Presidency, the Speaker of the House shall act in the capacity of Acting President to complete the unexpired term, this in addition to his other duties as Speaker of the House of Delegates.

Section 5. Vice-Speaker of the House of Delegates

The Vice-Speaker shall preside at meetings of the House of Delegates in the absence of the Speaker of the House, and shall succeed to the Speakership in the event of death, resignation, or other cause creating a vacancy in the Speakership of the House of Delegates.

Section 6. Secretary-Treasurer

The Secretary-Treasurer shall be a member of the Council and shall keep the minutes of the proceedings of this body. As Treasurer, he shall give bond at the expense of the Association and in such an amount as may be required by the Council. He shall receive all funds for dues and assessments collected by the Executive Secretary as well as other receipts collected for advertising, bequests, donations and other sources of income, and obtain an accounting from the Executive Secretary concerning same. He shall deposit the funds collected in a depository approved by the Council, and shall disburse from such accounts expenses approved by the Council on a voucher, signed by the Executive Secretary and countersigned by the President. He shall present the Council and House of Delegates, annually, a report of receipts and expenditures and the state of the funds in his hands, and shall subject his accounts to such examination as the Council and House of Delegates may order. Investments of reserve funds shall be made by the Treasurer on order of the Council in United States Government bonds and be held by him in safe keeping, subject to the order of the Council. He may borrow money in the name of the Association, and may use as security, if necessary, property held by him in safe keeping, only on the order and authority of the Council.

Section 7. Executive Secretary

The Executive Secretary shall be an employee of the Oklahoma State Medical Association and need not be a physician or a member of the Association. He shall be employed by the Council which shall fix his term of employment and designate his salary. He shall attend all meetings of the House of Delegates and shall be the recording secretary of both the House of Delegates and the Council. When in executive session, the House of Delegates and/or the Council may, by a majority vote, permit his presence. He shall keep minutes of the proceedings of all sessions and shall be secretary of all committees of the Association when called upon and available, and assist them in the performance of their duties. He shall, under instruction from the Committee on Publicity, issue and send to lay publications such articles as may be prepared and authorized for general publication, and secure and assist medical speakers to address, on invitation, lay organizations on subjects pertaining to individual or community health. He shall, whenever requested, assist any of the component societies of the Association in securing speakers or otherwise preparing a program for special meetings. He shall, at all times hold himself in readiness to advise and aid, so far as practical, any and all officers and committees of the Association. He shall be custodian of all records, books and papers belonging to the Association, except such as properly belong to the Secretary-Treasurer, and shall keep account of and promptly turn over to the Secretary-Treasurer all funds of the Association which come into his hands. He shall be bonded at the expense of the Association in such an amount as shall be required by the Council. He shall provide for the registration of the members and delegates at the Annual Meeting and cooperate with the Credentials committee in the preparation of a list of the elected and qualified delegates from the component societies. He shall, with the cooperation of the secretaries of the component societies, keep a register of all licensed physicians of the state and cooperate with the American Medical Association in maintaining a complete roster of membership and detailed information thereon. He shall report in writing, promptly, proceedings of the House of Delegates, Council, or important committees and any other matters of importance or significance which should be published, to the Editorial Board of the Journal for their approval for publication. He shall aid the Councilors in the organization and improvement of county and/or district societies and in the extension of the power and usefulness of this Association. He shall conduct the official correspondence, notifying members of meetings, officers of their election and committeemen of their appoint-

ment and duties. He shall employ such office assistants as may be ordered by the Council, and shall make an annual report to the Council and the House of Delegates. He shall supply each component society with necessary blanks for membership and annual reports. He shall keep an account with the component societies charging against each society its assessments, collect same and promptly turn the funds over to the Secretary-Treasurer. Acting with the Committee on Scientific Work and the Editorial Board of the Journal, he shall issue all programs. He shall maintain an office in the capital city of the State, providing for such office space and at such expense as may be approved by the Council. His office shall be designated as the Official headquarters of the Association. Travel expense and other necessary expense in the conduct of his office and in performance of his duties, shall be submitted monthly to the President.

CHAPTER VII—The Council

Section 1. Meetings

(a) The Council shall hold regular meetings during the year. Such meetings to be every three months with one meeting held no later than 30 days prior to the date of the Annual Meeting at which time the budget of the Association will be considered.

(b) The Council shall meet at the call of the President or by petition to the president by a majority of the Council.

(c) The Council shall meet daily during the Annual Session.

(d) The Council shall meet on the last day of the Annual Meeting for the installation of newly elected members. They shall program the mandates and recommendations of the House of Delegates and pursue other duties as provided by the Constitution and By-Laws.

Section 2. Presiding Officer

The President of this Association shall be the Chairman and presiding officer of the Council, and, in his absence, the following officers in succession shall assume such duty: Vice-President, Speaker of the House, Vice-Speaker of the House, and President-Elect.

Section 3. Annuol Reports

The Council through its Chairman, shall make an annual report to the House of Delegates to be presented during the first meeting of the annual session.

Section 4. Individuol Duties of Councilors

Each Councilor, shall be organizer, peace maker and censor for his district. He shall visit each county in his district at least once each year for the purpose of organizing component societies where none exist; keep in touch with the activities, and to aid in the betterment of the component societies of his district, and to inquire into the conditions of the profession and improve and increase the zeal of component societies and their members. He shall make an annual report of his activities, and with such recommendations as may be indicated, to be presented to the House of Delegates at the annual session or published in an issue of the Journal preceding the annual session.

Section 5. Collective Duties of Councilors

(a) The Council shall be the executive body of the House of Delegates and this Association, and between meetings shall exercise the powers conferred on the House of Delegates by this Constitution and By-Laws, providing that in the exercise of the interim powers thus conferred upon it, the Council shall take no action and consider no legislation contravening any general policy which shall have been adopted by the House of Delegates and which, at that time, is still in effect.

(b) The Council shall be the Board of Censors of the Association and shall consider all questions involving the privileges and standing of members, whether in relation to other members, to component societies, or to the Association as a whole. All questions of an ethical nature brought to the attention of the House of Delegates, the general meeting, or to officers of the Association shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members of component societies and all matters referred to the Council on appeal from component societies or from the individual councilors. Its decision in all cases involving questions regarding membership in this Association shall be final, except those matters involving jurisdiction of the Judicial Council or other appropriate body of the American Medical Association, which by right the member or component society may appeal to the American Medical Association. In such an event, the finality of the appeal shall be suspended until a decision has been received from the American Medical Association.

(c) The Council shall systematically endeavor to promote friendly intercourse among physicians of the same locality, as well as throughout the state, shall encourage post-graduate and research work as well as home study, and shall endeavor to have the results utilized and intelligently discussed in component societies; shall consider and advise as to the material interests of the profession and of the public in those important matters wherein it is dependent on the profession; and shall keep informed and advised concerning medical and public health legislation and diffuse popular information in relation thereto.

(d) The Council shall have authority to organize in the sparsely settled sections of the State, the physicians of two or more counties into societies to be designated by hyphenating the names of two or more counties so as to distinguish them from other classes of component societies and these societies, when organized and chartered, shall be entitled to all the privileges and representation provided therein for county societies until such counties may be organized separately.

Section 6. Component Societies

(a) Each Component Society of this Association shall file a copy of its Constitution and By-Laws with the Executive Secretary.

(b) Charters shall be issued to county societies on application to and on approval of the Council and shall be signed by the President and Secretary-Treasurer of this Association. Upon recommendation of the Council, the House of Delegates may revoke the charter of any component society whose actions are in conflict with the letter or spirit of the Constitution and By-Laws of this Association. No charter shall be issued to any component society unless the membership of such society is qualified under Chapter I, Sections 1 and 2, of these By-Laws. From the time of adoption of this amendment it shall be mandatory for each component Society to secure a charter within six months.

Section 7. Employees and Headquarters

All employees of this Association, including the Executive Secretary, shall be selected or approved by the Council, which shall fix the length of employment, salaries, and allowances. It shall approve the selection of headquarters of the Association at the state capital city by the Executive Secretary, approve assistants employed by him and determine or approve the expense involving same.

Section 8. Committee on Appropriations and Auditing

The Council shall prescribe the methods of accounting and through a committee of three of its members to be known as a Committee on Appropriations and Auditing, shall audit all accounts of this Association and receive reports for its approval or rejection. It shall adopt an annual budget providing for the necessary expenses of the Association, which shall be prepared and presented for approval by the House of Delegates.

Section 9. Salaries

Salaries of all employees of the Association shall be fixed by the Council.

Section 10. Exhibits

Exhibits at annual meetings, arranged for by the Executive Secretary, shall be approved and authorized by the Council. No article or compound shall be allowed among the exhibits which is held unethical or improper by the Council on Pharmacy and Chemistry, Council on Physical Therapy, Council on Foods, and the Bureau of Exhibits of the American Medical Association.

Section 11. Editorial Board

The Council shall select members of the Editorial Board of the Journal of the Oklahoma State Medical Association, herein referred to as the Journal, as provided for in Chapter VIII of these By-Laws.

Section 12. Journal

Upon the recommendation of the Editorial Board and the Executive Secretary, the Council shall authorize the issuance of the Journal and provide necessary appropriations for the publication of the same. It shall have final jurisdiction in the matter of policy and in regulating the activities and authority of the Editorial Board and Executive Secretary.

CHAPTER VIII—The Journal

Section 1. Name

The official publication of the Association shall be the *Journal of the Oklahoma State Medical Association* and referred to in these By-Laws as the *Journal.*

Section 2. Publication

The *Journal* shall be published once each month during the calendar year and distributed on or about the first of each month for the month for which it is named and numbered.

Section 3. Management

The Executive Secretary shall be the business manager of the *Journal,* shall arrange for its printing, have charge of the advertising and other business matters relative to the publication of same, subject to the advice and approval of the Editorial Board and the Council.

Section 4. The Editorial Board

The Editorial Board shall consist of three members selected by the Council for a term of three years, subject to removal by the Council, if and when the interests of this Association demand same.

(a) Immediately upon the adoption of these By-Laws, the Council shall elect members of the Editorial Board, one each for terms of one year, two years, and three years. Thereafter, at the expiration of the term of each member, a successor shall be elected for a term of three years. The Council shall designate one of the elected board members as Editor-in-Chief, and this designation shall, at all times, be subject to change by the Council by giving thirty (30) days written notice to the Editor-in-Chief. Vacancies on the Board shall be filled by the Council for the unexpired terms.

(b) The Editorial Board shall have ful charge of the editorial policy of the *Journal;* shall select articles for publication among papers read at the previous annual session or any original contributions other than such papers which, in their judgment, will promote the best interests of the scientific program and policy of this Association; shall supervise and approve advertising material submitted for publication by the Executive Secretary; and perform any and all other duties as custom and usage may dictate to promote the best interests of the Association and in producing the best medium of advancing scientific and other information for the members of this Association.

(c) The Editorial Board will be responsible only to the Council, which shall have authority to change or modify the policy and management of the Board, in publishing the *Journal.*

(d) The Executive Secretary shall keep a detailed account of the transactions in publishing the *Journal,* including income therefrom and expenses. A separate report, pertaining to this matter, will be submitted for approval to the Council.

CHAPTER IX—Committees

Section 1. Standing Committees

The standing committees of this Association shall be Annual Session, Credentials, Scientific Work and Exhibits, Constitution and By-Laws and Grievance Committee.

Section 2. Manner of Appointment

(a) Committee on Annual Session.

The Committee on Annual Session shall be composed of the President, President-Elect, Secretary-Treasurer.

"(b) Grievance Committee."

The Grievance Committee shall at all times be composed of the last five (5) living Past-Presidents of this Association.

(c) All Other Standing Committees.

All other Standing Committees designated in Section 1 shall be composed of six members who shall be appointed by the President, subject to approval of the Council, for a term of three years, and until a successor has been appointed and qualified; appointments being staggered so that there shall be only two appointed in any one year unless a vacancy shall occur, which shall be filled by the President for the unexpired term of the vacancy except the Credentials Committee which shall be governed by Section 3 (a) of this Chapter.

Section 3. Committee on Credentials

(a) The Committee on Credentials shall be members of the House of Delegates. Members appointed to this Committee shall be members of the House

of Delegates at the time of appointment. If any member of the Committee is subsequently not re-elected to the House of Delegates by his County Society or is otherwise disqualified as a delegate, the President shall appoint a regularly certified Delegate to fill the vacancy on the Committee left vacant by the member of the Committee who cannot qualify and the newly appointed member shall serve the unexpired term as long as he is qualified.

(b) The Committee on Credentials shall receive from the Executive Secretary a list of the members in good standing of each component society immediately prior to the Annual Session. They shall also obtain a list of duly elected delegates from each component society and shall determine the eligibility to sit as the authorized representatives of their respective component societies.

(c) In case of contest of delegates from any component societies, the Credentials Committee shall sit in judgment thereon and recommend for approval by the House of Delegates their findings. At the opening session of the House of Delegates, the Credentials Committee shall submit an authorized list of delegates and determine the presence of a quorum before the House of Delegates is authorized to proceed with official business.

Section 4. Committee on Annual Session

The Committee on Annual Session with the advice and assistance of the Executive Secretary shall provide suitable accommodations for the meeting of the Association in the city designated by the House of Delegates at the last previous annual session. They shall designate special committees to have charge of the various activities of the annual session and cooperate with committees of the local society of the convention city. With the cooperation of the Committee on Scientific Work and Exhibits programs of the session shall be prepared sufficiently in advance for publication in the *Journal* preceding the Annual Session. They shall have jurisdiction over Scientific Exhibits and applications for such should be approved by the Committee before the Executive Secretary is authorized to provide space for them. This Committee is authorized to select and appoint any such sub-committees as, in its opinion and judgment, will facilitate the carrying on the annual session to the best interest of all concerned.

Section 5. Committee on Scientific Work and Exhibits

The Committee on Scientific Work and Exhibits shall determine the character and scope of the scientific proceedings of the Association at each session, subject to the instruction and supervision of the Council. At least thirty (30) days previous to the annual session, they shall prepare and issue a complete program announcing the order in which papers, discussions and other business shall be presented, and which shall be published in the *Journal* issued previous to the annual session.

Section 6. Committee on Constitution and By-Laws

The Committee on Constitution and By-Laws shall consider and recommend to the House of Delegates changes in the Constitution and By-Laws to the end that the basic framework of the Association shall accomplish the desires of the membership. The Committee shall meet at such time and place that will allow for the consideration by the House of Delegates of recommended changes to the Constitution and By-Laws at the first meeting of the House of Delegates at which time they might be voted on as otherwise provided in the Constitution and By-Laws.

Section 7. Grievance Committee

(a) Investigation

The Grievance Committee shall investigate all complaints concerning members of this Association which may be received by the Association when such complaints are received in writing and signed by the individuals making such complaints.

(b) Procedure

The Grievance Committee shall establish its own procedure for handling complaints filed with it, in accordance with these By-Laws, and is authorized to make recommendations to members of this Association complained of and to complainants in an effort, to adjust or dispose of cases on a fair and equitable basis for all concerned.

(c) Disposal of Cases

When the Grievance Committee is unable to negotiate the settlement of any case pending before it, as a result of the refusal or neglect of the member of the Association concerned to comply with the recommendations of the Committee, it shall then refer the case directly to the component society of which the physician is a member. In so referring any case to a component society the Committee shall advise the member of such referral and shall provide the component society with a complete copy of the Committee's file and its recommendations concerning said case.

In any instance in which a case is referred to a component society by the Grievance Committee and in which the component society does not, within thirty (30) days of such referral, initiate action to bring the matter before the component society for hearing, the Grievance Committee may, at its discretion, file formal charges, before the component society, concerning such case and if such charges are not prosecuted as provided in the Constitution and By-Laws of the component society, or within thirty (30) days, the Grievance Committee may then file charges before the Council which shall promptly hear such charges and dispose of the case.

The Council shall hear charges preferred against members of component societies by the Grievance Committee. The Council shall establish its own procedure for hearing such charges, provided, however, that in all instances, the charges against members of component societies shall be reduced to writing and the evidence presented shall be germane to such charges. Copies of the charges shall, in all instances, be furnished to the member of the component society against whom the charge has been preferred. The member complained of shall have adequate opportunity to prepare his defense and shall not be required to answer such charge in writing, although he may do so if he desires. The date of hearing shall in no event be less than twenty (20) days from the date copies of the charges are furnished the member complained of. Notice of at least ten (10) days as to the date and place of hearing shall be given the member complained of. The member against whom such charge be preferred shall have the right to be accompanied at the hearing by counsel if he so desires. The Council shall have the right to have present counsel of its choice for advice and assistance during any hearing, but such counsel shall not have any vote.

Section 8. Special Committees

(a) Special Committees may be appointed by

the President on his own initiative or on order of the Council and/or the House of Delegates.

(b) All special committees shall consist of three or more members and shall be appointed to serve for one year concurrently with the term of office of the President appointing such committee unless previously dismissed by him.

CHAPTER X—Dues and Assessments
Section 1. Dues

(a) Oklahoma State Medical Association Dues

The amount of annual dues shall be determined by the House of Delegates during each annual session for the next succeeding calendar year, and shall be levied per capita on the members of the Association. Dues shall be due and payable on or before January 1 of the year for which they are levied. The Secretary of each component society shall cause to be collected and shall forward to the Executive Secretary the dues for its members, together with such data as shall be required for a record of its officers and members. Any member whose name has not been reported for enrollment and whose dues for the current year have not been remitted to the Executive Secretary of this Association on or before March 1, shall stand suspended until his name is properly reported and his dues for the current year properly remitted.

(b) American Medical Association Dues.

All active members of this Association shall be required to pay such annual dues and/or Special Assessments of the American Medical Association as may be levied by its House of Delegates. American Medical Association dues and/or Special Assessments shall be collected by the Secretaries of the component Societies and forwarded to the Executive Office of this Association, in the manner provided for State Association Dues or as provided by the American Medical Association.

(c) Half Dues

Any member who is a full time employee of any sub-division of Federal, State, County or Municipal Government, non-profit organizations, or medical school, who receives no outside remuneration from his medical skills and whose annual remuneration does not exceed five thousand dollars including all subsistence allowances or has not been engaged in the practice of medicine in excess of two years since his hospital training and has not held a full and active membership in the State Medical Association, shall be assessed for one-half of the annual dues of the Association. The eligibility for membership falling within these qualifications is to be a decision of the County Medical Society and an option of the applicant for membership. This membership shall be considered the same as an active membership and shall include all rights and privileges of an active membership. Any applicant for membership who has not previously held membership in this Association shall pay dues on the basis of the date he is elected to membership in the County Medical Society. If elected during the first quarter of the year, he will pay full dues and if elected in any subsequent quarter, he will pay dues based on that quarter and the remainder of the year.

(d) Undue Hardship.

Any member who suffers a temporary physical disability or who for other good and sufficient reasons would suffer an undue hardship by the payment of his dues in this Association may be granted a waiver of such dues for not more than a year at a time on recommendation by the Component Society of which he is a member if that component society has also waived his local dues, and upon approval of such recommendation by the Council.

(e) Military Exemptions.

Any member of this Association who enters active duty in the Armed Forces of the United States during any period of national emergency shall be exempt from the payment of his dues in this Association for the calendar quarter of the year in which he enters active duty and for such time as he remains on active duty and until January 1, following his release from active duty. Provided further that any member who has paid his dues in full prior to his entry on active duty shall receive a refund of such dues for the calendar quarter in which he entered active duty and for the remaining quarters of the year for which his prior payment was made. Provided further that any member of this Association who is the spouse of a member exempt from dues under this sub-section and who by reason of the military service of the other spouse finds it necessary to discontinue the active practice of medicine, shall be entitled to the same exemption privileges as provided in this sub-section for those in military service.

Section 2. Assessments

The House of Delegates shall have the authority to levy special assessments on the membership of this Association in addition to regular dues as provided herein. Such special assessments are to be on an equal per capita basis except those active members who are not required to pay more than one half of the regular yearly dues, this category of members shall be subject to pay one-half of all special assessments made on active members. Special assessments are to be collected in the same manner as dues; provided, however that the House of Delegates shall provide for the time of paying such assessment and establish date of delinquency of same. The method of collecting and reporting of such assessments shall be provided as for dues in Section 1 of this chapter.

Section 3. Record of Payment

The record of payment of dues and assessments on file in the Office of the Association shall be final as to the fact of payment by a member and as to his right to participate in the business and proceedings of the Association and of the House of Delegates, and as to membership status in the American Medical Association.

CHAPTER XI—Component Societies
Section 1. County and District Societies

All county or district societies now chartered and in affiliation with the Oklahoma State Medical Association, or those that may hereafter be organized under the authority of the Council of this Association, are acknowledged as component societies as referred to in this Constitution and By-Laws provided that their Constitution and By-Laws do not contain provisions in conflict with the Constitution and By-Laws of this Association. The Council, with the approval of the House of Delegates, shall have the authority to revoke the charter of any component society whose actions are in conflict with this Constitution and By-Laws. Lack of representation of a duly accredited delegate or alternate at three consecutive annual meetings of the House of Delegates of this Association shall be sufficient

grounds for withdrawal of a charter by a majority vote of the House of Delegates.

(a) Requirements for Establishing and Maintaining a County Society.

To create or re-activate a County Medical Society, the provision of Section 3 of this Chapter of these By-Laws must be met. To maintain a County Society the number of active members must be at all times at least five in number, the Society must meet at least six times each year with one meeting being in either November or December for the purpose of electing officers, delegates and alternates of the County Society for the succeeding year. The Secretary of the Society at the time of the election of new officers shall immediately transmit in writing to the Executive Office of this Association the results of its election.

(b) To Create and Maintain a District Society.

As provided in Chapter III, Section 4, subsection (c), the House of Delegates shall approve the creation of District Societies and representation in the House of Delegates shall be in conformity with the provisions of Chapter III, Section 1.

To organize a District Society there must be at least ten active members of this Association within the District and at least one member shall reside in each of the respective counties of the District. The County Societies and members of this Association involved in the organization of the District Society shall by mutual agreement notify the Executive Office of this Association regarding their intention. The request shall be presented to the Council at any regular meeting, at least ninety (90) days prior to the annual meeting of this Association. The Council, with their recommendations, shall publish in the **Journal** at least thirty days prior to the Annual Meeting, the request for an organization of a District Society. When such a District Society is approved by the House of Delegates, it shall be issued a charter and the component county societies shall surrender their charters to the Executive Office of the Association. The provisions of this Constitution and By-Laws governing County Societies shall apply to District Societies.

Section 2. Membership

(a) When a member in good standing of a component county society, except members who are in the United States Military or Public Health Service, State Public Health Service, or one whose employment makes his residence in any community temporary, moves to another county in the state, he shall be given a written certificate of his membership by the secretary of his county society without cost. This certificate shall accompany application for membership in the county society in the county to which the member has moved. Pending action on the application, such member shall be considered in good standing in the society from which he was certified. In case of rejection, the applicant may appeal for relief to the Council. Appeal must be made in writing and must be delivered into the hands of the Council not more than thirty (30) days following date of notice of rejection. Consideration of the appeal shall be given by the Council at the earliest time possible. Not more than ninety (90) days shall elapse following the date the appeal has been received by the Council until a hearing shall be given to the applicant and to the component county society, and the action taken by the Council on the appeal shall be final. Under no circumstances shall membership be retained in a component county medical society for a period longer than one year following the issuance of a certificate of removal. Any physician living near a county line may hold membership in the medical society of the county adjoining his residence if it is more convenient for him to attend the meetings of the medical society of that adjoining county, but before a physician is affiliated with a medical society in a county in which he does not reside, the consent of the medical society in the county in which he does reside must be first obtained. Should no County Society exist in the County in which a physician resides he may be eligible for membership in an adjoining County Society until such time as there are sufficient qualified physicians residing in the county to formulate a Society within the county.

(b) Should the license of a member of a component society be suspended for any period, his name shall be automatically dropped as of the date of suspension, and he shall not be entitled to reinstatement of membership in the State Association until January of the year following his period of suspension.

Should a case regarding the licensure of a physician be pending before the Oklahoma State Board of Medical Examiners, membership privileges in the State Association cannot be granted the physician in question until such time as a final determination has been reached by said Board.

(c) A component society may censure, suspend or expel any member for any cause set out in the Constitution and By-Laws of said society or for any cause deemed sufficient at law for disciplinary action.

(d) Disciplinary Procedure.

No disciplinary action shall be taken against a member of a component society without serving the accused at least ten (10) days in advance of trial with a written copy of the charges against him and affording him the opportunity of a hearing. Should a hearing or hearings be held, records thereof shall be kept by the secretary of the component society, who, within fifteen (15) days after the component society has taken final action, shall transmit to the Council of this Association certified copies of such records.

(e) Appeals.

Any member against whom disciplinary action has been taken who feels that he has not been given a trial in accordance with the provisions of this Constitution and By-Laws and the Constitution and By-Laws of his component Society shall have the right to appeal to the Council, under such reasonable rules as the Council may adopt with respect to such appeals. To be considered by the Council, appeals must be made in writing within sixty (60) days after the appellant has been given written notice of censure, suspension or expulsion which is contemplated.

Upon receipt of an appeal the Executive Secretary of this Association shall write immediately to both the president and the secretary of the Component Society, notifying them that appeal has been made and demanding certified copies of all records in the case which have not been submitted previously, as provided in subsection (d) of this Section. If the component society fails to submit certified copies of records within sixty (60) days of demand, the appellant shall be reinstated to membership in good standing by the Council of this Association.

Section 3. Charter

Only one component medical society shall be chartered in each county. No County Society, however, shall be chartered or hold its charter unless at the time chartered the petition for charter is signed by at least five physicians believed to be eligible for charter memberships in the society.

(a) Charters of County Medical Societies may stand suspended or may be revoked should the number of members fall below that of the minimum requirements for two consecutive years.

(b) Custody of Charter

The charter of each component society as issued by the Oklahoma State Medical Association shall be preserved and be in the custody of the Secretary of each component society.

(c) To Dissolve District Societies.

Should the members of a District Society desire to disassociate themselves as a District Society the action shall be taken at a regular meeting of the District Society in sufficient time to give ninety days notice of such request to the Executive Office of the Association and the action of the District Society will be presented to the House of Delegates for approval. Co-existing with this action the physicians from the counties making up the District Society may petition the House of Delegates for the creation of County Societies within their respective counties as otherwise provided in these By-Laws.

Following the holding of the regular meeting of the District Society should the members from the County desiring to withdraw still be of the same decision, a petition signed by a majority of the members residing in the County wishing to withdraw shall be submitted to the House of Delegates through the Executive Office of the Association at least ninety days prior to the Annual Meeting.

Co-existing with this action the physicians from the withdrawing County may petition the House of Delegates for the creation of a County Society within their County as otherwise provided in these By-Laws.

Section 4. Constitution and By-Laws

Each component society shall have a Constitution and By-Laws. These shall be in conformity with the Constitution and By-Laws of the Oklahoma State Medical Association, and a copy thereof shall be transmitted to the headquarters of this Association for approval and record. Any amendment or change in such Constitution and By-Laws of component societies shall be submitted to the Council for its approval and then filed with the Executive Secretary.

Section 5. Functions and Duties of Component Societies

Each component society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted toward improving the science and art of medicine and the welfare of the people. Systematic efforts shall be made by each member and by the society as a whole to increase the membership until it includes every doctor of medicine who meets the qualifications for membership in the County.

(a) Each component society shall keep an official record book or books, which shall include an official copy of its Constitution and By-Laws, a roster of its membership, and all personal data pertaining to members which may be of historical and other use.

Section 6. Certification of Delegates

Each component society, at least sixty (60) days prior to the annual session of this Association, shall elect one or more delegates and an equal number of alternates to represent it in the House of Delegates, in accordance with Chapter III, Section 1, of these By-Laws. The secretary of each component society shall send a list of delegates and alternates to the Executive Secretary of this Association as soon as possible before the annual session, and provide each delegate and alternate with a certification of such election for presentation to the credentials committee, if such procedure is deemed necessary or advisable by said Committee. Representation in the House of Delegates shall be contingent on compliance with the foregoing provisions.

CHAPTER XII—Parliamentary Procedure

Where the Constitution and By-Laws of the Association does not make provision for parliamentary procedure, deliberations of this Association, committees, or parts thereof, shall be conducted in accordance with parliamentary usage as defined by the latest edition of Roberts Rules of Order.

CHAPTER XIII Amendments

These By-Laws may be amended at any annual session by a majority vote of the delegates present at that session, provided that the proposed amendment has been properly submitted in writing to the House of Delegates at the first meeting of the annual session and has laid on the table at least until the following session.

CHAPTER XIV—Special Recognition of Members Who Have Been in the Practice of Medicine at Least Fifty Years

Any physician, a member of this Association, who has been engaged in the active practice of medicine for fifty years and a member of this Association for the preceding five years on recommendation of his County or District Society shall be entitled to have his name entered on a special roster maintained by the State Association in recognition of his services to humanity for a half century.

The qualifying member shall receive special recognition at a meeting of the House of Delegates during the Annual Meeting and shall be presented with a suitable certificate from the Oklahoma State Medical Association in commemoration of his outstanding length of service in the profession. Should circumstances prevent the member being present at the Annual Meeting to receive this honor, the presentation will be made at an appropriate time and place to be selected by the president.

CHAPTER XV—Enabling and Repealing Clause

Section 1. Upon adoption of these amendments to the By-Laws, all previous By-Laws, motions of record, rules and regulations in conflict with same are hereby repealed, provided, however, that all officers of this Association now in office shall continue their incumbency until their successors are elected, as provided in these By-Laws.

Section 2. Any Chapter, Section, subsection, or any part thereof in conflict with the present Constitution of the Oklahoma State Medical Association shall be of no effect, but all other parts of these By-Laws not so conflicting with the present Constitution shall be in full force and effect immediately upon its passage.

(Adopted 1940) (As Amended Through 1954)

VOLUNTARY HEALTH AND WELFARE AGENCIES

Oklahoma Division

The American Cancer Society, Inc.

937 Commerce Exahcnge Building | Telephone REgent 9-2659 | Oklahoma City, Oklahamo

M. L. WARDELL, Ph. D.
President

GREGORY E. STANBRO, M. D.
Chairman, Executive Cammittee

CLARK SUDDUTH
Executive Directar

Purpases

The American Cancer Society is the only national voluntary health agency devoted to the control of cancer through research, education and service to cancer patients. Its purposes are:

1. To encourage, foster and conduct programs for the continuing education of the public concerning cancer, its symptoms and detection, so as to further the timely use of medically and scientifically recognized means for the detection, diagnosis, treatment and prevention of cancer.
2. To encourage, foster and conduct programs for the continuing education and training of physicians, dentists, nurses, technicians and others as to all matters concerned with the detection, diagnosis, treatment and prevention of cancer.
3. To encourage and foster the establishment, and to assist financially and otherwise the equipment, maintenance and operation (except actual ownership) of hospitals, clinics, laboratories, and other facilities for the detection, diagnosis, treatment and prevention of cancer, except the actual treatment of cancer patients.

Local Units

Local units, usually on a county-wide basis, are the organizational elements of the Oklahoma Division. These assist in carrying out the above purposes in defined geographical areas, and they solicit and accept contributions of money and property for the furtherance of these programs.

The Oklahoma Division currently is engaged in the reactivation and reorganization of these local Units. Under the active supervision of medical doctors in each county, Unit Boards of Directors are being established, as are committees to carry out the various phases of education, service and fund raising.

Public Education

The American Cancer Society saves thousands of lives today by showing individuals, through films, exhibits, publications, etc., how they can guard themselves against cancer. It combats lack of knowledge of cancer through information services, to which any individual may turn.

Public education is carried out by the local Units. It stresses the fact that at least one third of all cancer deaths could be prevented today through knowledge and the obtaining of adequate treatment promptly.

The Seven Danger Signals which may mean cancer are stressed, as are periodic physical checkups, routine chest x-rays for men over 45, periodic self-examination by the female of her breasts, etc.

The Society's educational materials are prepared under medical supervision. Included are a series of excellent films; a variety of pamphlets to fit every need; posters; exhibits; press, radio and TV material, etc.

Professionol Education

The latest technical and medical information is available to doctors, dentists and nurses through special films, publications, exhibits, reprints, etc. Professional education is planned by physicians for physicians and allied professional people.

Members of the Oklahoma State Medical Association are invited to address their specific requests to the Oklahoma Division. A variety of material and the resources of the medical and scientific library of the American Cancer Society are available to all physicians.

Literature

"CA — A Bulletin of Cancer Progress" is furnished bi-monthly to all members of the Oklahoma State Medical Association. A series of Monographs, now numbering eight booklets, has been published by the Society and distributed to all Oklahoma medical doctors. The journal "Cancer" is published by the Society, as is the bibliography, "Cancer Current Literature," each available on subscription.

Films

The following professional films are available on loan from the Oklahoma Division:

Cancer: The Problem of Early Diagnosis
Breast Cancer: The Problem of Early Diagnosis
Gastro-intestinal Cancer: The Problem of Early Diagnosis
Uterine Cancer: The Problem of Early Diagnosis
Oral Cancer: The Problem of Early Diagnosis
The Exfoliative Cytologic Method in the Diagnosis of Gastric Cancer
Lung Cancer: The Problem of Early Diagnosis

The medical and scientific library of the Society in New York makes available loan prints of practically all films considered worthwhile in the cancer field.

Other Materials and Pragrams

The Oklahoma Division conducts a professional program in connection with its annual meeting each December. It will assist county medical societies and other local medical groups in arranging professional teaching programs within their communities. It provides medical exhibits, etc.

Service

The Oklahoma Division encourages the provision of certain volunteer services for those who have cancer. It encourages and assists the establishment of modern facilities for the detection, diagnosis and treatment of cancer. The service program aims at the effective utilization of the family doctor in every aspect of case finding, under the theme: "Every doctor's office a cancer detection center." The Oklahoma Division assists in provision of narcotic drugs and hormones if needed for palliation and if community and family resources are exhausted.

The payment of bills for hospitalization of a cancer patient is disapproved in principle, because it is felt this is not the most efficient use of our resources and because it is so largely felt that local government has the primary responsibility for providing hospitalization for those unable to meet its costs.

Local Service Programs

Among the service activities recommended to local Units by the Oklahoma Division are:

Information services providing the assistance of trained volunteers to those needing help with a cancer problem, under medical supervision.

Cancer dressings, prepared by volunteer groups and provided to patients on the authority of the patient's physician.

Loan and gift closets, providing essential sick room materials and similar items donated locally or made by members of the county Unit committee.

In some instances, home visiting services may be developed, under medical supervision, only if approved by the local medical society and if the volunteers are provided with adequate training and proper supervision and their services are made available on specific recommendation of the patient's physician.

Professional Services

The Oklahoma Division assists three Tumor Clinics, at University Hospital in Oklahoma City, St. John's Hospital in Tulsa, and in Muskogee. Medical doctors may refer patients to any of these clinics. The clinics provide diagnosis and treatment for indigent patients according to the policies of the various hospitals and medical groups involved. Doctors should address inquiries to the director of the clinic involved.

A traveling clinic service is offered by the Oklahoma Division's Mobile Cancer Clinic. Teams of doctors visit Oklahoma towns upon the invitation of local medical groups, providing a one-time detection clinic service. Patients are usually referred by their physician, but patients observing a cancer danger signal may attend. The Mobile Clinic service visits about 25 counties annually. The visiting teams generally provide a professional education program to coincide with the clinic.

A tissue diagnostic service is provided free by Oklahoma pathologists for indigent patients. The Oklahoma Division serves as a clearing office for this service. Tissue specimens may be sent to the Oklahoma Division office, accompanied by forms which are obtained from that office.

The Oklahoma Division furnishes narcotic drugs for palliation to indigent cancer patients, upon request of the attending physician and after clearance by the local Unit. This service is designed to provide pain relieving drugs for terminal patients only where family and community resources are inadequate. Androgen and Estrogen also are provided. Requests are made to local Unit officials of the Cancer Society. Testosterone is provided directly from the Division office in Oklahoma City. Narcotics and Estrogen are supplied by local druggists on prescription and the Society is billed for the cost. This service is limited to $15 per patient per calendar month. Such drugs as Thorazine and similar substances cannot be provided, nor can appliances or supplies.

Testasterone will be provided at wholesale cost on the request of the patient's physician directly from the Oklahoma Division office, if the physician feels this is needed by his patient. If the patient is unable to pay, as described in the paragraph next above, the hormone is provided without cost.

Physicians may request dressings for their patients directly from the Oklahoma Division office if local dressings groups cannot meet the need.

Room and board for indigent patient receiving outpatient care in the Tumor Clinics is paid for by the Oklahoma Division if other resources are not available. Authorization for this care is determined by the Director of the Tumor Clinic involved.

Research

If present rates continue, cancer will strike one of every four Americans now living. Of every four persons who have cancer, one is now being saved. Another could be saved with current knowledge, through prompt and adequate treatment. The remaining two cannot be saved with what is now known, and it is for these two of every four who have cancer that research holds the ultimate answer. For the fiscal year 1954-55, the American Cancer Society has allocated more than $5,500,000 for cancer research. In the last 10 years, the ACS has devoted about $35,000,000 to research. Currently, research by 1000 top-flight scientists is being supported. They work in approximately 132 hospitals, universities, laboratories, etc., in 37 states.

One-fourth of all money donated to the American Cancer Society is earmarked immediately for cancer research, ahead of any other costs. While money can never become a substitute for the scientist's creative intelligence, the tempo with which research is conducted, the frequency with which new ideas are explored, and the speed with which laboratory findings are applied clinically, all depend to a large extent on the amount of funds available for research.

Institutional grants are made by the American Cancer Society to institutions engaged in cancer research, and generally are furnished without strings attached to further the overall research program of the institution. Individual grants-in-aid are provided to scientists, after careful screening and recommendation by the Committee on Growth of the National Research Council. Grants and Fellowships for the advanced training of selected young doctors in cancer institutions also are provided out of the National Society's share of ACS contributions.

ACS research grants to the Oklahoma Medical Research Foundation and to scientists at that institution and at the University of Oklahoma have totaled $230,334.52 since 1948. Current grants in Oklahoma are:

Oklahoma Medical Research Foundation	
Dr. Charles D. Kochakian	$36,650
University of Oklahoma	
Dr. A. A. Katzburg	$1,188
Dr. M. R Shetlar	$6,000
	$7,188
TOTAL	$43,838

Oklahoma State Heart Association

An Affiliate of the American Heart Association

825 N. E. 13th Street Telephone CE 2-4947 Oklahoma City, Oklahoma

MAXINE TURNER, Executive Secretary

The purpose of the association is the reduction of premature death and disability caused by the many forms of heart and blood vessel disease.

Organization

The Heart Association is non-profit and membership is based on interest. A Board of Directors consisting of 40 members representing various parts of the state, governs the organization. Officers consist of a President, President-Elect, Vice President, Secretary and Treasurer, who are elected annually. The program of the Heart Association is made possible by contributions to the Heart Fund, and by memorial funds.

Research

Heart research is the primary program of the Heart Association. The greatest benefit to the individual heart patient will come from advances in scientific understanding of the cardiovascular diseases, which can only be gained through research.

Of the money raised in Oklahoma, one-fourth goes to the American Heart Association. Of that sum, one-half is ear marked for research in cardiology throughout the nation.

Of the three-fourths remaining in Oklahoma, one-half of the net goes to the Oklahoma Medical Research Foundation to support the Cardiology Research Section.

Education

The Heart Association brings up-to-date and authoritative information about heart disease to the general public through its extensive program of lay education. Such education helps protect healthy hearts and stimulates broader public support of research and participation in community efforts to improve the facilities and services needed by heart patients. By overcoming fears and harmful misconceptions, it also lays the basis for better cooperation with the physician by heart patients and their families.

To develop increased public awareness, the association distributes pamphlets, books, and other materials on various aspects of cardiovascular disease, such as exhibits, posters, heart diagrams and films. We cooperate with newspapers, magazines, radio, television and other media of popular communication to help provide accurate and constructive data through these channels.

Another major function is that of transmitting research findings to physicians through the state, and new knowledge to allied groups such as dentists, nurses, and medical-social workers. The publication MODERN CONCEPTS OF CARDIOVASCULAR DISEASE is sent to all physicians in the state monthly. The book *Nomenclature and Criteria for Diagnosis of Diseases of the Heart and Blood Vessels*, is given to all senior medical students at the University of Oklahoma School of Medicine. We also supply films, slides, and models which are useful in medical teaching.

Community Service

The third phase of the heart program is community service including assistance in establishing cardiovascular clinics, school surveys, and job placement of industrial workers with heart disease.

National Foundation For Infantile Paralysis, Inc.

1141 N. Rabinsan FO 5-8461Telephane Oklahoma City, Oklahoma

MAXWELL PELISH,
State Representative—Western Oklahoma
Oklahoma City, Oklahoma

BILL EPPERSON,
State Representative—Eastern Oklahoma
Oklahoma City, Oklahoma

The purpose of the Foundation is to lead, direct and unify the fight against infantile paralysis. Activities include research, education, epidemic aid, and patient care. Grants are made to institutions for research in the transmission prevention, and cure of infantile paralysis, as well as in improved treatment methods. The educational program provides information to professional and lay groups, and scholarships and fellowships for training of doctors, nurses, physical therapists in a variety of specialized fields including virology, orthopedic surgery, pediatrics, physical medicine, orthopedic nursing, physical therapy, etc. In cooperation with representatives of health, welfare, and social agencies, epidemic preparedness programs are conducted to help communities meet outbreaks. Epidemic aid such as money, equipment, personnel, and professional consultation is available to communities. All programs of the National Foundation are made possible through contributions to the MARCH OF DIMES.

It is the policy of the National Foundation for Infantile Paralysis NOT to recommend any doctor or hospital but strictly for information purposes, the following hospitals in Oklahoma accepted and treated polio during 1954:

1. Valley View Hospital, Ada, Oklahoma
2. Alva General Hospital, Alva, Oklahoma
3. Children's Convalescent Hospital, Bethany, Oklahoma
4. Community Hospital, Elk City, Oklahoma
5. St. Mary's Hospital, Enid, Oklahoma
6. Guymon Municipal Hospital, Guymon, Oklahoma
7. Benedictine Heights Hospital, Guthrie, Oklahoma

8. Comanche County Memorial Hospital, Lawton, Oklahoma
9. Bone and Joint Hospital, Oklahoma City, Oklahoma
10. University Hospital, Oklahoma City, Oklahoma
11. Muskogee General Hospital, Muskogee, Oklahoma
12. LeFlore County Memorial Hospital, Poteau, Oklahoma
13. Stillwater Municipal Hospital, Stillwater, Oklahoma
14. Hillcrest Memorial Hospital, Tulsa, Oklahoma.
15. Junion League Children's Hospital, Tulsa, Oklahoma
16. St. John's Hospital, Tulsa, Oklahoma

All these hospitals do not normally accept polio, thus it is strongly urged that admission be arranged by telephone BEFORE sending a patient to any of them.

Since there are fewer hospitals than doctors concerned with the polio problem, continual contact is maintained with the hospitals and they can advise the patient whom to contact in their home county to receive financial assistance if needed.

Briefly, the policy of the National Foundation for Infantile Paralysis in rendering financial assistance is: "If the standard of living of the family involved will be materially lowered by the expense of giving the patient the best available medical care, then the National Foundation should pay that part of the expense which works a hardship on the family." All patient care assistance is rendered through the local County Chapter.

The referral of polio patients to the Georgia Warm Springs Foundation is not ordinarily recommended because necessary treatment in all except the most unusual cases can be provided with considerably lower expense for hospitalization and transportation when the treatment is provided through facilities available in the state. Patients having unusual residual conditions may be referred to Georgia Warm Springs by the attending physician communicating with the Medical Director, giving the diagnosis and history as well as his recommendations. The medical staff at Georgia Warm Springs will review the case and, on the basis of their findings, will admit the patient when space is available. It is to the advantage of all concerned to hold the number of cases referred to Warm Springs to a minimum, since the greatly increased expense must be borne either by the family or by the National Foundation.

Any Oklahoma physician can feel perfectly safe in arranging hospitalization for a polio patient and depending on the family and hospital to make financial arrangements later.

Oklahoma Medical Research Foundation

825 Northeast 13 Street — Telephone CE 2-9527 — Oklahoma City, Oklahoma
HUGH G. PAYNE, General Manager

Historical Background

In 1944 the Oklahoma Medical Research Foundation was only an idea in the thinking of a small group of Alumni of the University of Oklahoma School of Medicine and other interested physicians.

In 1945 the idea developed from the talking stage into a plan for a medical research foundation to be formed to provide funds to promote, develop, construct and maintain a medical research institute.

1946 saw the plan become an organization. The Alumni of the Oklahoma University School of Medicine provided funds for a survey of the State to determine the public's interest in supporting the Foundation. On August 23, 1946, the Oklahoma Medical Research Foundation was incorporated under the laws of the State.

Unified Effort of Allied Professional Groups

Never in the history of this nation or any other nation as far as Foundation officials are able to ascertain has a great medical research center come into being through the unified effort of all legitimate allied professional healing groups. Early in 1947 the Doctors of Medicine set a goal of providing one million dollars within that professional group for the operation and maintenance of the Foundation. The campaign organization was set up which provided for a state chairman, district chairmen, county and community chairmen. As a result of this action, more than 900 doctors have pledged over $800,000 cash, and with the gift of income producing property, this total is well over $1,000,000.

In September 1947 the Oklahoma State Dental Association officially approved participation of Dentistry in the campaign research program and set a goal of $225,000 to be raised among the Dental Profession.

The Oklahoma State Pharmaceutical Association requested the Foundation officials to allow their association to accept its full share of the founding program; a goal of $300,000 was set, and the pharmacists have worked hard to reach their goal.

In November 1947 the State Nurses Association unanimously adopted a resolution providing a research fund of at least $50,000 among the nurses of the State toward the Foundation's support. This group organized its campaign and in a very short time the Nurses' Research fund of $50,000 had been reached and oversubscribed.

Certainly Oklahoma is setting an enviable record toward providing ways and means for the progress of Medical Science. Without the leadership of the Doctors of Medicine, this unified effort would not have been possible.

Administrative and Operational Policies

1. Characterization
   A non-profit corporation.
2. Purposes (General)
   To promote educational objectives by encouraging, fostering and conducting scientific investigations in medicine in cooperation with, or independently of, the School of Medicine of the University of Oklahoma and in cooperation with the faculty, staff and students thereof and those associated therewith, or independent of such faculty, staff and students and in connection therewith and incidental to such purpose.

A. To foster and encourage education and learning in the medical sciences, both pure and applied, both in connection with the School of Medicine and independently thereof;

B. To provide or assist in providing the means and machinery by which scientific discoveries and processes may be developed, applied and patented and the medical uses thereof determined commercially, and by which such utilization or disposition may be made of such discoveries and processes, and patent rights or interests therein as may tend to stimulate and promote and provide funds for further scientific investigation and research;

C. To train persons for the conduct of such investigations and research and to acquire and disseminate knowledge in relation thereto;

D. To provide a research institute building to facilitate the advancement of both the clinical and the fundamental medical sciences, and to equip and maintain said institute through private contributions, grants and endowments, and to supply the necessary funds and money in endowments or grants.

E. To receive by gift, devise, bequest or otherwise, any money or property, either absolutely or in trust, to be used, either the principal or income therefrom, as may be directed in the furtherance of any of the above mentioned purposes or any other purpose within its corporate powers;

F. To own, acquire, hold and manage such real property or personal property as may be reasonably necessary for the business and object of such association;

G. To make grants or gifts of money or property to hospitals, schools or other public or private institutions whose purposes may be similar to the purpose herein contained; to aid in paying the salaries of teachers, staff employees, doctors, nurses, or other personnel of such institutions; to give or grant such funds or property for the purchase of equipment, the defraying of expenses, or for any other purpose not inconsistent with the purpose herein contained;

H. To provide space and adequate facilities for the special study and treatment of patients;

I. To experiment upon, test, promote and develop the scientific and commercial value of inventions, discoveries and processes.

J. To prosecute and aid in the prosecution of applications for patents and to obtain patents, both foreign and domestic; and of rights, licenses and interests in processes and patents; and to accept gifts or grants of money, patents, patent rights or other property, subject to such conditions or trusts as may be attached thereto or imposed thereon with respect to payment of royalties, application of income or proceeds, or otherwise, and to obligate itself to perform and execute any and all such conditions or trusts.

* * * * It is the purpose and intent of this corporation to cooperate with the School of Medicine of the University of Oklahoma or any other agencies which involve the teaching of medicine or allied subjects, or involve research therein, to the fullest extent for the mutual benefit of such school or agencies and this corporation shall be under the exclusive control and direction of the directors of this corporation.

Membership

Any person who contributes to the support of the Foundation is a member of the organization.

The usual physician membership consists of a $1,000 pledge which may be payable over as long as a 10-year period.

Officers

The officers of the Foundation consist of six — President, Vice-President, Secretary, Treasurer, Chairman of the Executive Committee and General Manager of the Foundation. All officers except Chairman of the Executive Committee are elected by the Board of Directors, representing the membership, for a term of one year. The Chairman of the Executive Committee is nominated by the Executive Committee and approved by the Board of Directors. Any officer is eligible to succeed himself.

Meetings

The annual meeting of members of the Foundation shall be in the fall of each year. The time and place of the meeting shall be established by the Executive Committee which shall be required to give thirty days' notice of such meeting, by mail, to all members. Notice to local units shall be considered the equivalent of notice to the Unit Members.

Board of Directors

There shall be a Board of Directors of not less than 20, nor more than 41, elected from the membership of the Foundation and or as hereinafter provided for a term of three years, approximately one-third to be elected each year by and from the membership of the Foundation. Any Director shall be considered eligible for election to succeed himself. Directors shall be of three classifications: Officers, Representative Directors and Directors-at-Large.

Executive Committee

The Executive Committee shall consist of not less than 10 nor more than 28 members.

It shall be the duty of the Executive Committee to exercise, when the Board of Directors is not in session, any and all powers of the Board of Directors which lawfully may be delegated, including the power to execute legal instruments in the name of the Foundation, and to perform such other duties as may be assigned to it by the bylaws.

The following specific duties are assigned:

* * * * * To prepare an annual budget for the Foundation as provided in Section 5 (D), Article VII; * * * * * To supervise the activities of the General Manager as provided in Article V, Section 6; To supervise the activities of the Director of the Research Institute and Hospital as provided in Article V, Section 7; * * * * * To act upon recommendation from the Director of the Research Institute and Hospital regarding funds for scientific purposes. to appropriate the funds of the Foundation as deemed advisable and supervise their expenditures. * * * * * *

Standing Committees

Members of all original Standing Committees shall be appointed for terms of three years, two years and one year, divided as equally as possible, thereafter, all appointments will be for terms of three (3) years, subject to the advice and consent of the Executive Committee. Any member shall be considered eligible for election to succeed himself.

Advisory Committee on Administration

This committee shall be appointed by the Executive Committee on the recommendation of the Chair-

man of the Executive Committee and shall consist of not less than five (5) members, including representatives from the Executive Committee. It shall make recommendations concerning any problems of administration within the Foundation, Institute or Hospital as requested by the Chairman of the Executive Committee.

RESEARCH Advisory Committee

This committee shall be appointed by the Executive Committee after consultation with the Co-ordinator of Research and shall consist of not less than seven (7) members of which not fewer than two (2) shall represent the basic medical sciences.

This Committee shall:

a. Instruct the Co-ordinator of Research on questions concerning the scientific operation, certain appointments (Section Heads, Supervisor of Clinical Activities, Consultants and Research Affiliates), allocation of space and facilities of the Institute and Hospital as submitted by the Co-ordinator of Research and on such other matters as are delegated by the Executive Committee.

b. Make recommendations to the Executive Committee concerning scientific policies of the Institute and Hospital.

School of Medicine Committee (Committee on foundotion sponsored Reseorch by the School of Medicine)

This committee shall be appointed by the Executive Committee on the recommendation of the Dean of the School of Medicine. It shall consist of not less than seven (7) members selected from the faculty of the School of Medicine and the Co-ordinator of Research and General Manager of the Foundation.

The duties of this committee shall be:

1. To allocate funds derived from the Foundation and designated by the Executive Committee of the Foundation for the purposes of research by the faculty members of the School of Medicine.
2. To allocate laboratory space designated by the Executive Committee of the Foundation as available within the Institute for research by faculty members of the School of Medicine.
3. To make recommendations to the Co-ordinator of Research for the use of the Hospital facilities for purposes of research by faculty members of the School of Medicine.
4. To assist in the development of public relations pertaining to those research matters which concern both the Foundation and the School of Medicine.
5. To prepare reports concerning the above activities as requested by the Executive Committee.

Inter-Allied Professionol Committee

The Inter-Allied Professional Committee shall consist of not less than nine (9) members composed of (3) physicians, three (3) dentists and (3) registered pharmacists and the Chairman of the respective Professional Relations Committees. Other professional groups may be added to this committee from time to time with equal representation when deemed advisable by the Executive Committee. The State Presidents of the groups named, with the consent and advice of their respective counsels, shall submit nominees to the Executive Committee for its consideration. The members shall serve terms as stipulated in Section 1, Article IX. Members of the Inter-Allied Professional Committee shall be appointed by the Executive Committee, shall elect their own Chairman and make reports of action taken to the Executive Committee.

It shall be the duty of this committee to (a) foster, organize and promote inter-professional relationships for the good of the Foundation, for the enlightenment of the individual members of the organizations involved, (b) to encourage closer relationships in raising the standards of medicine, dentistry and pharmacy for the good of mankind, (c) to serve as arbitrators on problems involving the component organizations.

Professionol Relotions Committees

a. *Committee on Medicine:* Members and the chairman of this committee shall be appointed by the Executive Committee.

The objectives of this committee shall be:

1. To interpret to the members of the medical profession the medical program of the Institute and Hospital.
2. To arrange, foster and promote medical seminars, lectures and conferences in conjunction with the Co-ordinator of Research to be held under the auspices of the Institute for the purpose of keeping the members of the medical profession abreast of the scientific developments in the practice of medicine in the field of research.
3. To foster cooperation between the Foundation, Institute and Hospital and the medical profession in the state.
4. To advise the Executive Committee concerning the relationship of the Foundation, Institute and Hospital program with the medical profession.
5. To make recommendations to the Executive Committee on matters which concern the good of the Foundation and Medicine as a whole.
6. To make recommendations on other matters as requested by the Executive Committee.

b. *Committee on Dentistry:* Members and the chairmen of this committee shall be appointed by the Executive Committee.

The objectives of this committee shall be:

1. To interpret to members of the dental profession the dental research program of the Institute.
2. To arrange, foster and promote dental seminars, lectures and conferences in conjunction with the Co-ordinator of Research to be held under the auspices of the Institute for the purpose of keeping the members of the dental profession abreast of the scientific developments in the practice of dentistry and the field of research.
3. To foster cooperation between the Foundation, Institute and Hospital and dental profession in the state.
4. To advise the Executive Committee concerning the relationship of the Foundation, Institute and Hospital program with the dental profession.
5. To make recommendations to the Executive Committee on matters which concern the good of the Foundation and dentistry as a whole.
6. To make recommendations on other matters as requested by the Executive Committee.

c. *Committee on Pharmacy:* Members and the chairman of this committee shall be appointed by the Executive Committee.

The objectives of this committee shall be:

1. To interpret to members of the Pharmaceutical profession the pharmaceutical research program of the Institute.
2. To arrange, foster and promote pharmaceutical seminars, lectures and conferences in conjunction with the Co-ordinator of Research to be held under the auspices of the Institute for the purpose of keeping the members of the pharmaceutical profession abreast of the scientific developments in the field of pharmacy.
3. To foster cooperation between the Foundation, Institute and Hospital and pharmaceutical agencies of the state.
4. To advise the Executive Committee concerning the relationship of the Foundation, Institute and Hospital program with the pharmaceutical profession.
5. To make recommendations to the Executive Committee on matters which concern the good of the Foundation and Pharmacy as a whole.
6. To make recommendations on other matters as requested by the Executive Committee.

Scientific Long Range Planning Committee

This committee shall be appointed by the Executive Committee on the recommendation of the Chairman of the Executive Committee and it shall consist of not less than five (5) members. It shall make recommendations as requested by the Chairman of the Executive Committee concerning the development of a productive and balanced program of research which will provide opportunities in as many fields of medical and related sciences as feasible.

Budget Committee

Members of this committee shall be members of the Executive Committee and shall be appointed by the Chairman of the Executive Committee. There shall be not less than five (5) members of this committee.

The duties of this committee shall be:

1. To receive the budget requests from the General Manager or his representative and to prepare the final budget and present it to the Executive Committee for final action.
2. To consider carefully all budget requests from the General Manager, Co-ordinator of Research, and Section Heads where deemed necessary, for the purpose of arriving at the most equitable budget.
3. To make certain that proposed expenditures as outlined in the budget are within the foreseeable income of the Foundation.
4. To counsel with and advise the General Manager and Co-ordinator of Research on all problems concerning the budget, in an effort to provide the maximum efficiency of the Foundation, Institute and Hospital, within available income.
5. To make definite recommendations to the Executive Committee in relation to specific financial matters when requested by the Executive Committee.

Bequests, Estates and Investments Committee

Members of this committee shall be appointed by the Executive Committee and the committee shall consist of not less than seven (7) members to include not more than three (3) members of the Executive Committee who are attorneys-at-law or officers of a banking institution or otherwise interested and experienced in the matters of bequests, estates and trusts.

The duties of this committee shall be:

1. To counsel with and advise the General Manager or his representative on the development of programs for securing bequests, estates and trusts for the benefit of the Foundation, Institute and Hospital.
2. To make recommendations, through the General Manager or his representative to the Executive Committee on matters pertaining to bequests, estates and trusts.
3. To render assistance in the preparation of bequests, estates and trusts for the benefit of the Foundation, Institute and Hospital.
4. To explain the possibilities existing within the frame-work of the Foundation for bequests, estates and trusts, to the legal profession, the banking industry and related organizations.
5. To make recommendations regarding investments of funds accruing to the Foundation and act as the consulting committee in relation to property gifts to the Foundation wherein the Foundation is required to manage property.
6. To render opinions on financial matters as referred to the Committee by the Executive Committee.
7. To prepare and distribute necessary legal forms for use by clients naming the Foundation as beneficiary or recipients of bequests, trusts and endowments.
8. To actively engage in contacting prospective donors in relation to bequests.

Building and Ground Committee

Members of this committee shall be appointed by the Executive Committee. This committee shall consist of not less than five (5) members who are skilled in the field of building and grounds management. The following will be among the members of this committee: Superintendent of the Physical Plant, University of Oklahoma at Norman; Superintendent of the Physical Plant, Oklahoma A&M College at Stillwater; Superintendent of Building and Grounds, University Hospital and School of Medicine; and one registered professional engineer from a reputable firm of Architects and Engineers.

The duties of this committee shall be:

1. To counsel with and advise the General Manager or his representative on all matters pertaining to management and maintenance of the buildings and grounds of the Foundation, Institute and Hospital.
2. To make recommendations concerning the buildings and grounds maintenance and management, through the General Manager or his representative to the Executive Committee.

Personnel Committee

Members of this committee shall be appointed by the Executive Committee. The committee shall consist of not less than five (5) members, chosen because of their interest and experience in the field of personnel procurement and management.

The duties of this committee shall be:

1. To consult with and advise the General Manager or his representative concerning personnel policies of the non-scientific personnel, of the Foundation, Institute and Hospital.
2. To make recommendations, through the General Manager or his representative to the Executive Committee on personnel policies and procedures.

Records and Accounts Committee

Members of this committee shall be appointed by the Executive Committee. The committee shall

consist of not less than four (4) members, to be chosen because of their interest and ability in the field of accounting.

The duties of this committee shall be:

1. To consult with the General Manager or his representative concerning accounting practices of the Foundation, Institute and Hospital.
2. To make recommendations, through the General Manager or his representative to the Executive Committee concerning accounting practices of the Foundation.

Public Relations Committee

Members of this committee shall be appointed by the Executive Committee. There shall be not less than eight (8) members to be chosen because of their interest and ability in the field of public relations.

The duties of this committee shall be:

1. To consult with and advise the General Manager or his representative on all phases of the public relations program of the Foundation, Institute and Hospital.
2. To evaluate any and all public relations activities of the Foundation, Institute and Hospital and make recommendations within this field to the General Manager or his representative.
3. To make recommendations, through the General Manager or his representative to the Executive Committee.

This committee shall meet at the request of the General Manager or his representative.

Other Committees

We suggest that at least the following temporary committees should be appointed by the Executive Committee whenever the need arises.

a. *National Advisory Committee:* The members of this committee should be selected from nationally recognized authorities in medical and related research by the Executive Committee to advise it on such matters as deemed necessary.

b. *Fund - Raising Committee:* This committee shall advise and counsel with the General Manager on fund-raising activities.

Program of Research

The general inclusive field of study is geriatrics. The Foundation's scientific staff does both clinical and basic research involving laboratory studies, experimentation using animals and the operation of a special research hospital.

The six major sections of research include oncology, cardiology, metabolic disturbances, organic chemistry, biochemistry and psychosomatic medicine.

1955 STATUS

With $2,518,000 as the total amount pledged, the Foundation has been able to operate since 1946.

Activities include the construction of a modernistic building housing excellent facilities for all types of research and the securing of a scientific staff which now numbers 114 people.

Research in the basic field has been under way for five years, with primary emphasis on the preparation of steroid hormones and studies concerning the effect of hormones on various body tissues.

The clinical program began in September 1952 with the opening of the 22-bed research hospital.

The Foundation has become well enough known that several people have named it as beneficiary in their wills, and the Foundation is already receiving financial support from several wills, from trust funds, and it is receiving income from the gift of a sanitarium, made by Dr. Coyne H. Campbell of Oklahoma City. This property, which is still operated by Doctor Campbell, has brought several thousand dollars annually to the Foundation.

Those in charge of operation of the Foundation, who are outstanding professional and business leaders of this area, are confident that with the continued interest and support of the physicians and the lay citizens of the state, the Foundation will be able to make important contributions to medical knowledge, through the years.

Oklahoma Tuberculosis Association

Oklahoma Division of the National Tuberculosis Association is financed by the sale of Christmas Seals. The aim is eradication of tuberculosis.

Program includes prevention of tuberculosis through health education, control through case finding and diagnostic clinics, and leadership in promotion for care of patients by government through county health departments and state sanatoriums. Each county of the state has its own association operating under supervision of the state association. Local programs stress health education and organization under direction of executive directors where funds permit.

Projects include furnishing educational supplies to physicians, county health departments and schools. Monthly bulletins on tuberculosis are mailed to physicians. The association provides a counseling service for patients and contacts and makes the referrals to physicians or established clinics. Literature, posters, and moving pictures are used by the health education branch of the association in teaching. It conducts meetings, conferences and institutes for the dissemination and exchange of information both lay and professional groups interested in tuberculosis and general health problems.

The State Association gives financial cooperation in mass x-ray surveys for discovery of tuberculosis, and furnishes public health nursing, chest clinics and follow-up in counties without health departments. County Christmas Seal funds in cooperation with health departments, provide films for chest x-ray clinics in many counties. Pamphlets for instruction and guidance of tuberculosis patients and contacts and literature for the public on prevention of tuberculosis are provided through county health departments or county tuberculosis association.

Tuberculosis associations promote standard public health departments in keeping with methods approved by organized medicine; the program conforms to the plan outlined in Section Eight on "Health Education" of the Program of the American Medical Association for the Advancement of Medicine and Public Health. These funds are not used to finance responsibilities of government except during periods of demonstration. The aim is promotion of sound governmental procedures in meeting the many angles of the problem of tuberculosis.

The medical organization of the Oklahoma Tuberculosis Association is the Oklahoma Trudeau Society. All licensed physicians interested in chest diseases are eligible for membership. The Trudeau Society gives advice and counsel to the tuberculosis association on all medical problems and works for professional advancement of its members.

GOVERNMENTAL HEALTH AND WELFARE AGENCIES

The University of Oklahoma School of Medicine and University Hospitals

800 Northeast 13th Street Telephone RE 6-1511 Oklahoma City, Oklahoma

MARK R. EVERETT, Ph. D., Dean
School of Medicine and Superintendent of Hospitals

ROBERT C. LOWE, M.D., Medical Director
University Hospitals

The maintenance and operation of the University Hospitals in Oklahoma City are justified on the basis of medical education. The primary functions of the Hospitals relate to the instruction of undergraduate students in medicine and in nursing, and to the training of graduate students in medicine (internes, assistant residents, residents, and fellows). Opportunities are provided, in addition, for the training of persons in certain auxiliary fields, as medical technology, X-ray technology, and dietetics. Obviously, in fulfilling these functions, a significant service factor develops; but it is emphasized that the service factor, important as it is recognized to be, is a function secondary to the primary educational obligation.

The service factor in the teaching hospital requires certain development frequently not understood, sometimes misunderstood or misinterpreted by those who are unaware of the educational obligations or who are interested in no other function than the service factor, so that this statement is presented in an effort to clarify certain relevant points in order that practicing physicians of Oklahoma may interpret to their patients the opportunities for and the limitations of hospital care offered in the University Hospitals.

As the Hospitals are set up, certain types of patients are admitted through agencies set up by statute, by following procedures established by the agencies or by statute (Crippled Children's Commission, State Veterans Department). The limitations of geographic location of the physical plant, of the budget for maintenance and operations, of standards in medical care, in medical education, and in nursing education, and of personnel, also operate to make it possible only to render certain services. (There are available no beds for the care of psychiatric patients, no beds for the care of tuberculosis patients, no beds for the care of patients, adults, adolescent, or child, ill with any of the usual communicable diseases except as these are especially set up and provided for to meet an emergency, as in an outbreak of acute anterior poliomyelitis, for example. For obvious reasons, the care of obstetrical patients under ordinary circumstances is limited to those of residence in a zone of short radius around Oklahoma City. Similarly, emergency accident admissions are limited by various factors including transportation, physical facilities, et cetera.)

Before presenting rather detailed information relating to the procedures involved in hospital patients admission, it seems appropriate to emphasize the point that it is highly important that arrangements for the admission be made in advance (by telephone in emergencies, by mail if time permits) of the patient's appearance at the Hospitals for admission, by direct communication with the Office of the Director of Out-Patient Department attention Admissions Office, University Hospitals, 800 N. E. 13th Street, Oklahoma City 4, telephone: Oklahoma City RE 6-1511.

The procedure related to the admission of patients to the Oklahoma Hospital for Crippled Children, to the University Hospital, and to the Out-Patient Clinics are outlined below.

On the basis of the new Oklahoma Crippled Children's Act (HB 144), provision is made for the medical care of unmarried dependent children under twenty-one years of age. Under this act the Oklahoma Hospital for Crippled Children, as well as other hospitals of the state accredited by the Crippled Children's Commission, are required or authorized to care for children whose families cannot pay for the necessary medical and surgical treatment.

The appropriate application forms are obtainable from the County Judge or the local Department of Public Welfare. They should be filled in by the local examining physician (private or county health officer), signed by the responsible parent or guardian and signed by either the County Judge or the County Welfare Director. The application should then be submitted to the Oklahoma Commission for Crippled Children.

When the local physician appraises the condition an emergency, authorization for immediate hospitalization can be secured by telephone communication with the Admitting Office. The appropriate papers are then brought along with the patient. It is always necessary that the responsible parent or guardian accompany the child to the Hospital. In the case of smaller children it is necessary that someone familiar with the onset and course of the illness accompany the child to give the historic facts. The local physician's own observations will be of great help in most instances. In addition, specific permission authorizing appropriate operative procedures is necessary.

Since the operating capacity of the hospital is not unlimited, the Staff and the Admitting Department have the responsibility of selecting patients to be admitted to the In-Patient Services. In the interest of carrying out this responsibility the initial study of each patient is carried out in the Clinics. It is for this reason that the patient is given an appointment to the Clinics whenever this is possible without jeopardy to him or her. If the home physician or health officer feels that the patient presents an emergency problem, arrangements should be made by telephone communication with the Admitting Office. In some instances these arrangements will neces-

sarily be delayed or may not be possible within the required time. In the later case suggestions as to possible arrangements elsewhere will be made.

The primary qualifications for admission include the provisions that: (1) the patient and his illness fit into the undergraduate medical teaching program of the School of Medicine. (2) active medical or surgical treatment is necessary and there is a good prospect of aid to the patient. It is not possible to admit patients who require only nursing care, nor to admit those with chronic illnesses in which the possibilities or treatment are recognized to be problematical. It is always necessary for the Hospitals to have patients whose problems are of teaching value. This requires that there be variation in clinical problems and an avoidance of overweighting of services.

The more immediate the need the earlier the patient will be admitted. It is only by the selection of patients that the service and teaching functions of the Hospitals can be carried out, and at the same time avoid, insofar as possible, the disappointment of expectations that cannot be fulfilled.

The Main (University) Hospital is set up for the care of indigent adult patients. The authorization for such care is obtained from the County Commissioners. The local physician or health officer wishing to refer a patient to the Hospital can facilitate admission materially by providing all pertinent information requested in the County forms (Application for Admission to the University Hospital or Clinics). These forms are available from the County Commissioners' Offices. Upon completion they should be mailed to the Admitting Office of the University Hospital. With the aid of the social and medical information outlined therein, the necessary arrangements will be made and the patient will be notified as to the day and time that the clinic to which he should come meets. It will be recognized that this appointment method is necessary when it is understood that between 40 and 50 thousand patients are seen in the University Hospital's Out-Patient Clinics each year.

The Clinics of the Hospitals have three service functions: (1) the diagnostic study of patients referred by the attending physician, (2) the ambulatory care and follow-up of patients when such care is feasible, and (3) the selection of patients for hospitalization. All of these functions form the basis for a very important aspect of the teaching of students of medicine in the third and fourth years of the course. It is the nearest approach to actual office practice that can be offered the undergraduate student of medicine in the institution.

Due to limited personnel, the large patient load, and the teaching requirements placed on the Staff (primarily voluntary), it is not always possible to send to the attending physician detailed summaries of the finding and treatment in each patient. All inquiries can and will be answered fully, so the referring physician should not hesitate to ask for them if he is particularly interested. Whenever possible, and always when requested, the patient will be referred back to his home physician with the results of the study and recommendations for continuing treatment.

The Out-Patient Clinics do not have a pharmacy to fill prescriptions. The Social Service will help in making arrangements with the County Commissioners to supply medicines as recommended by the Staff. This is true also in the case of special diet requirements that cannot be met by the patient himself. The referring physician, likewise, should enlist the Commissioner's aid.

Because of a total lack of facilities in the University Hospitals for the care of such patients, in certain types of clinical problems (such as tuberculosis), the patient will be referred back to the attending physician and local health department to arrange for care in one of the State Sanatoria. The same course is followed in psychiatric disturbances requiring institutionalization. The limited time available from the psychiatric staff, the large number of cases, and the time required for psychotherapy, make it impossible for the Neuro-psychiatric Clinic to offer anything but diagnostic and short term simple therapeutic aid.

When hospitalization in the University Hospitals is recommended every effort is made to arrange for it on the basis of the Staff's impression of the patient's needs. Real emergencies are admitted without delay. Occasionally it is necessary to arrange for hospitalization elsewhere. If the problem is not emergent and a bed is not available, the patient will be sent home and notified at a later date to return for admission to the Hospital.

For the information of physicians and of their patients, it seems appropriate to invite attention to certain other miscellaneous points:

(1) The University Hospitals have no facilities or funds through which the transportation of patients from home to hospital or from hospital to home may be provided. In some instances (crippled children, cancerous patients, poliomyelitic patients), local agencies may be able to provide transportation through specific arrangements with the interested and responsible group (Crippled Children's Commission, Local Chapter of the Oklahoma Division of the American Cancer Society, Local Chapter of the National Foundation for Infantile Paralysis).

(2) Certain medicolegal aspects of the care of minors or children make it necessary that all patients under the age of 21 years be accompanied by parents or guardians.

(3) When the attending physician sends the patient in to the University Hospitals for admission or for Out-Patient Clinic care, it is expected that he provide the Admitting Office with social data and other relevant information, including at least a summary of history, of physical and clinical findings of impression or diagnosis, and of treatment instituted. The Hospitals, in return, will make every effort to supply the physician with a summary of the findings, of diagnosis, of treatment, and of recommendations as soon as possible. (There have been many complaints of the Hospitals' not providing the patient's physician with such a report, and they probably have been justified fully in many instances. Two factors operate to give rise to such delays: (a) the attending staff physician in the University Hospitals is nearly always a voluntary teaching staff member whose time is at a premium, and (b) inadequacy of secretarial service delays getting letters out after dictation).

During the past several years, to better meet certain medical needs of indigent Oklahomans, the use of ambulatory care has been emphasized. The Out-Patient Clinics and the In-Patient Services of the Hospitals constitute a total medical facility, the parts of which must be used to best advantage for the medical needs of the individual patient. Operated in this way they can best serve their dual purposes of medical and nursing education and provide high quality medical care within the limits determined by the funds provided.

State Department of Health

3400 North Eastern GArfield 7-2421 Oklahoma City, Oklahoma

GRADY F. MATHEWS, M.D., Commissioner of Health

The State Board of Health is created by the Constitution, Article 5, Section 39. The first legislature vitalized this provision by providing for the appointment of a Commissioner of Health, who was the only administrative officer in the Board of Health until 1945, when the legislature made provision for a Board of Health, members of which were appointed by the governor and the Board of Health, in turn, elected the Commissioner. This is the plan in use today. The State Board of Health is authorized to adopt rules and regulations for its own government.

For efficiency in administration, the State Department of Health is separated into divisions: Chronic Diseases, Epidemiology, Fiscal Services, Maternal and Child Health, Mental Hygiene, Preventive Dentistry, Public Health Nursing, Sanitation and Public Health Engineering, Statistics and Vital Records, Tuberculosis Control, and Venereal Disease Control.

The State Department of Health serves in an advisory and consultant capacity to the various local health departments in promoting local programs. Because of the highly technical nature of some services, some as epidemiology, vital statistics, laboratory and some engineering, these are offered on a statewide basis rather than through local health departments.

Chronic Disease Control

This division cooperates with local medical societies, local health departments, the Oklahoma Branch, American Cancer Society, and the University Hospitals in providing services and facilities for regularly scheduled cancer diagnostic clinics in Oklahoma City, Tulsa, and Muskogee.

This division also cooperates with the local medical societies, local health departments, the Oklahoma State Heart Association, University Hospital, and Crippled Children's Hospital in providing services and facilities for regularly scheduled cardiac clinics in Oklahoma City, Tulsa, and Muskogee.

This division provides consultative personnel to local health departments participating in diabetes detection and follow-up programs and also cooperates with the Oklahoma Diabetes Association in their programs.

In cooperation with the Postgraduate Office of the University of Oklahoma Medical School and the Extension Division of the University of Oklahoma, a professional education program is carried on for physicians and nurses in cancer, diabetes, and heart disease.

Preventive Dentistry

An educational and clinical program is conducted principally in organized local health areas. The division provides, upon request, consultation service to the dental and medical professions on common problems. Instances of this nature are:

1. The dental implications of venereal disease. Rapid dental surveys have become an established case-finding procedure for congenital syphilis in racial groups having a high prevalence of the disease.
2. Dental epidemiological problems. Vincent's infection in epidemic form is the usual occasion for consultation under this classification.
3. Dental caries control: (a) Lacto-bacillus acidolphilus salivary counts will be made to determine the degree of caries activity. Consultation on nutritional control of dental caries is available. (b) Consultation is available to municipalities, including local medical and dental societies, having fluoridation of their water supplies under consideration.

Epidemiology

This division has as its function the work of coordinating and directing efforts toward the control of communicable disease within the state. As a basis for control procedures, the State Department of Health has adopted the revised rules and regulations recommended by the American Public Health Association and published in their manual, "The Control of Communicable Diseases in Man." (1950 Edition).

Reportable and Quarantinable Diseases

Cholera, plague (including bubonic, septic and pneumonic), smallpox (variola), epidemic louse borne typhus, yellow fever.

Reportable and To Be Isolated Diseases

Anthrax, chickenpox, diphtheria (including membraneous croup), dysentery (bacillary), infectious encephalitis, favus, glanders, measles, meningococcus meningitis (cerebro-spinal fever), mumps, paratyphoid fever, poliomyelitis, psittacosis, scarlet fever (scarletina, scarlet rash), septic sore throat, epidemic cerebrospinal meningitis, trachoma, tuberculosis (pulmonary), typhoid fever, whooping cough.

Reportable Diseases

Anthrax, botulism, brucellosis, chickenpox, cholera, epidemic diarrhea of newborn, diphtheria, dysentery (amebic and bacillary), infectious encephalitis, food intoxications (specify), German measles, glanders, hookworm, infectious hepatitis (including serum hepatitis), leprosy, leptospirosis, malaria (state type and where acquired), measles, meningococcal meningitis, mumps, ophthalmia neonatorum, poliomyelitis (state whether bulbar, paralytic or nonparalytic), psittacosis, rabies in man, rheumatic fever, ringworm of the scalp, Rocky Mountain spotted fever, scarlet fever, smallpox, streptococcal sore throat, tetanus, trachoma, trichinosis, tuberculosis (pulmonary - report stage and activity), tuberculosis (other forms), tularemia, typhoid and paratyphoid fever, typhus fever, whooping cough, yellow fever.

The physician is requested to report to the health officer on the weekly reportable disease cards. All suspected cases must be reported and treated as positive until a clear diagnosis can be made. Neglect or refusal of a physician or householder to report cases of communicable disease, makes him liable to a penalty.

Health Education

Good health is a joint responsibility of the individual and the community. It is acquired and

maintained only by the observance of certain standards and regulations which have been determined by physicians, dentists and other professional persons through experimentation, research and investigation. The state and local health dpeartments have a responsibility along with physicians, dentists, scientists and other professional personnel, in promulgating a program of health education.

The division of Health Education in the State Department of Health accepts its responsibility by conducting weekly radio programs on health subjects over WNAD. These programs are recorded and are available to any radio station in Oklahoma. Occasional programs giving information on health problems are given over other stations.

The division maintains a library of some 800 films and filmstrips covering all phases of public health. Most of these films are suitable for lay audiences, however, some are restricted for professional use only.

A weekly newsletter is prepared and distributed to some 400 newspapers in the state. The division prepares a monthly bulletin which has a circulation of 6500. A library of approximately 1500 volumes on different phases of health is maintained and a periodical file of more than 100 professional and technical magazines.

Arrangements may be made to furnish speakers and discussion leaders on subjects relating to the various phases of public health.

This division cooperates with other agencies in providing refresher courses for doctors and nurses, and in planning and conducting training courses for food handlers. Works with school administrators in programs designed to improve the health conditions for the school age child in Oklahoma.

Exhibits on health subjects for state and local meetings and for county and state fairs are prepared by the Health Education Division.

Requests for any of the services outlined above, should be sent directly to the Division of Health Education, Oklahoma State Department of Health.

The school health program is planned jointly by an official committee appointed by the State Departments of Health and Education. Representatives from the State Medical and Dental Associations will serve as consultants to this committee.

Hospital Licensure and Construction

The objective of the hospital licensure program is to raise the standards of patient care in hospitals and related institutions through better facilities. All hospitals, except state mental hospitals and Federally owned and operated hospitals are subject to the provisions of the 1945 Hospital Licensing Act. Minimum standards are promulgated by the State Board of Health, upon advice and recommendation of a legally constituted State Hospital Advisory Council.

In 1953 a separate but similar program was added governing Rest Homes, Nursing Homes and Related Institutions caring for the aged, infirm and convalescents.

In addition to the above licensing programs, the Federal-aid Hospital Construction Program (Hill-Burton) is also contributing to raising the standards of patient care by assisting in the construction of badly needed new hospitals and related facilities. The Federal Act was amended in 1954 to provide assistance on the construction of nursing homes, diagnostic and treatment centers and rehabilitation facilities. Priority of projects is based on relative need for each of the eight categories eligible for assistance.

The construction program is presently authorized by Congress to terminate June 30, 1957. It is expected by that time the need for additional facilities will have been fulfilled to a satisfactory level.

Labarataries

Laboratory service for the diagnosis and control of communicable disease is furnished through the Central Laboratory in Oklahoma City and five Branch Laboratories, located in Elk City, Lawton, Miami, Muskogee and Hugo.

Service is available for the diagnosis and control of the following diseases: Diphtheria, tuberculosis, gonorrhea, typhoid, dysentery (bacillary and amoebic), malaria, intestinal parasites, meningitis, pneumonia, Vincent's infection, rabies and streptococcal infections. Specimens for tuberculosis and stool specimens for amebiosis are checked both microscopically and by culture. Mycology specimens are also cultured and examined. Blood specimens are examined for syphilis, typhoid, undulant fever, tularemia, Rocky Mountain spotted fever, typhus and other febrile diseases. Quantitative serologic tests for syphilis are done on blood specimens from serologic positive and/or treated cases. The spinal fluid test for syphilis is also made. Rh testing is provided for patients attending Health Department Prenatal Clinics and for private physicians in rural areas where laboratory service is not available. Complement fixation tests are available for syphilis, the rickettsial diseases and certain viral diseases, including encephalitis, psittacosis, mumps, influenza, infectious mononucleosis and lymphocytic choriomeningitis. Premarital and prenatal blood tests for syphilis are made, as required by Law, and the Premarital Certificates are issued. Oklahoma Law requires the approval of all Laboratories performing premarital and prenatal blood tests and this evaluation and approval of private, clinical and hospital Laboratories is done by the Laboratory Division.

The Chemical Laboratory makes analyses of food, drugs, water, dairy products, alcohol and toxicological specimens. The State Law requires the vitamin enrichment of flour and bread sold in the State and the vitamin assay is made in the Chemical Laboratory.

Examinations, both chemical and bacteriological, are made on milk and water samples. Most of the water samples come from municipal supplies, but many are examined from private supplies also. Bacterial counts are made on glassware and utensils for restaurant sanitation. Special tests are made to assist in the investigation of food poison and other epidemics.

Special containers and instructions for the collection and mailing of specimens are furnished upon request. Consultation and short refresher training courses in serology and bacteriology are offered by the staff of the Central Laboratory.

Anyone interested in special tests not previously mentioned or in refresher training courses and laboratory consultation should write to the Division of Laboratories.

Local Health Services

Local health departments are made up of a team of public health workers: sanitarians, nurses and

clerks, under medical direction. It is through these organizations that public health services are carried to the people of a given area.

The functions of the local health departments are to maintain current information of births and deaths occurring in the area, along with basic information on the occurrence of disease; visiting nursing service to assist in carrying on the programs of communicable disease, including venereal disease and tuberculosis, to assist in carrying on maternal and child health programs, including school health, to assist physicians by helping the patient and family to understand and follow instructions relating to maternal and child health as well as chronic disease; sanitation service, including supervision of food, water, and milk supplies, and the sanitary disposal of wastes; and health education. The services of the public health department are available to assist physicians and others in the area in programs of mental health, cancer, diabetes, heart, and other chronic diseases, industrial health and accident prevention.

The Division of Local Health Service supervises the local health departments throughout the State. Organized local health departments are in operation in the following counties:

Adair	Linda Galloway, M.D.	Stilwell Community Hospital, Stilwell
Atoka	(Position Vacant)	Box 336, Atoka
Beaver	L. E. Emanuel, M.D.	Beaver Memorial Hospital, Beaver
Beckham	Leo R. Evans, M.D.	111 South Broadway, Sayre
Blaine	Leo R. Evans, M.D. (A)	Box 338, Watonga
Bryan	Seals L. Whitely, M.D. (A)	Box 388, Durant
Caddo	R. H. Mayes, M.D.	City Hall, Anadarko
Carter	Clifford Lorentzen, M.D. (A)	Box 606, Ardmore
Cherokee	Linda Galloway, M.D.	302 South College, Tahlequah
Choctaw	Elizabeth P. Fleming, M.D.	City Hall, Hugo
Cimarron	L. E. Emanuel, M.D.	Court House, Guymon
Cleveland	O. R. Gregg, M.D.	101 East Eufaula, Norman
Comanche	Charles H. Miller, Jr., M.D.	10 East "B" Street, Lawton
Creek	Loraine Schmidt, M.D.	Box 458, Sapulpa
Custer	Leo R. Evans, M.D.	Box 480, Clinton
Delaware	Rosemary Harvey, M.D.	Jay
Garvin	O. R. Gregg, M. D.	Box 32, Pauls Valley
Grady	C. P. Chumley, M.D.	Box 227, Chickasha
Hughes	Forest R. Brown, M.D.	Medical Arts Building, Holdenville
Jackson	Charles H. Miller, Jr., M.D.	City Hall, Altus
Jefferson	R. H. Mayes, M.D.	City Hall, Waurika
Kay	Harle V. Barrett, M. D.	Box 1959, Ponca City
Kiowa	(Position Vacant)	102½ East Fourth, Hobart
LeFlore	Rush L. Wright, M.D.	Box 48, Poteau
Logan	J. E. Souter, M.D.	111½ West Oklahoma, Guthrie
McClain	O. R. Gregg, M.D.	City Hall, Purcell
McCurtain	Elizabeth P. Fleming, M.D.	Court House, Idabel
McIntosh	(Position Vacant)	City Hall, Eufaula
Marshall	(Position Vacant)	401 E. Main, Madill
Mayes	Rosemary Harvey, M.D.	Pryor
Murray	(Position Vacant)	1023 West Broadway, Sulphur
Muskogee	John F. Hackler, M.D.	519 South Third, Muskogee
Oklahoma	M. L. Peter, M.D.	206 County Bldg., Okla. City
Okmulgee	R. D. Miller, M.D. (A)	Box 59, Okmulgee
Ottawa	Rosemary Harvey, M.D.	Court House, Miami
Payne	C. W. Moore, M.D.	Box 471, Stillwater
Pittsburg	Claude E. Lively, M.D. (A)	Third and Chadick Park, McAlester
Pontotoc	Ray U. Northrip, M.D. (A)	106 East 13th, Ada
Pottawatomie	K. W. Navin, M.D.	218 North Philadelphia, Shawnee
Rogers	Loraine Schmidt, M.D.	Claremore Health Center, Claremore
Seminole	Forest R. Brown, M.D.	Box 1101, Wewoka
Sequoyah	J. A. Morrow, M.D. (A)	Sallisaw
Stephens	R. H. Mayes, M.D.	Box 308, Duncan
Texas	L. E. Emanuel, M.D.	Court House, Guymon
Tillman	Charles H. Miller, Jr., M.D.	Library Building, Frederick
Tulsa	T. Paul Haney, M.D.	521 North Boulder, Tulsa
Wagoner	Loraine Schmidt, M.D.	Library Building, Wagoner

(A) Acting

Maternal and Child Health

The director of maternal and child health, the consultant nurse, and the nutritionists act as consultants to local health departments in helping them to develop their maternal and child health programs. The staff is also available for consultant services to hospitals in establishing standards for the care of mothers and infants.

Under the sponsorship of a committee from the State Medical Association, a perinatal mortality study is being carried on jointly by the University of Oklahoma Medical School and the State Department of Health. This project will be of service to the physicians in the State in that staff from the obstetric and pediatric departments of the University of Oklahoma Medical School, with assistance from

other departments in the University, are available for consultation and discussion with hospital staffs and clinic groups on problems involved in the care of the mother and infant during the perinatal period.

In cooperation with the University of Oklahoma Schools of Medicine and Nursing, this division arranges for postgraduate short courses in obstetrics and pediatrics for physicians and nurses throughout the State.

A series of prenatal letters has been prepared by this division and approved by the State Medical Association. These letters, along with other related material are mailed out at monthly intervals to expectant mothers whose named have been furnished either by private physicians or by county health departments.

A wide variety of material and child health publications are available from the State Department of Health and local health departments to physicians who wish to use them in patient education. Maternity educational films are also available on a loan basis from the State Department of Health film library.

Mental Hygiene Division

The program of the Mental Hygiene Division has been an educational one, teaching teachers, public health personnel and others who influence the lives of children and adults in their day-to-day contacts. To promote good mental health, an understanding of emotional adjustment in normal life situations is necessary; these include the physical, psychological and social changes from childhood to aging. To prevent chronic mental illness, emotional maladjustments and the early symptoms of mental illnesses, prompt referral for psychiatric consultation and treatment have been encouraged. The knowledge and clinical experience of the staff has been invaluable in interpreting the teatment and rehabilitation programs of the mental hospitals.

Mental Hygiene Clinics

In July, 1953 funds were discontinued to the University Mental Hygiene Clinic which was established in the Out-Patient Clinic Building and whose program was integrated with the total program of the University Hospitals and Clinics. Financial assistance to the Tulsa Child Guidance Clinic was sharply curtailed as the Community Chest and Council of Tulsa had taken over the support of the Clinic.

Since the Tulsa Child Guidance Clinic is strategically located in eastern Oklahoma and serves a large portion of the state's population, we have encouraged the professional personnel of the Clinic, the psychiatrist, phychologist and social workers, to serve as consultants in the surrounding communities. The Mental Hydiene Division has paid their traveling expenses. Psychological services have been made available to the Muskogee City School System on a regularly scheduled monthly basis.

In the fall of 1953 a citizens committee of Ardmore began planning the organization of the Carter County Child Guidance Clinic. Office furniture has been loaned to the new clinic and personnel from the Health Department have been consulted regarding developments. Some financial assistance has been given.

Post-Graduate Seminar for Physicians

A two-day post-graduate institute in psychiatry was held at the Medical School December 28-29, 1953. It was co-sponsored by the Mental Hygiene Division and the Division of Post-Graduate Instruction of the University of Oklahoma School of Medicine.

In July, 1953 a two-weeks Mental Health Workshop for Teachers was held at the University of Oklahoma. It was organized through the cooperation of the University of Oklahoma's Graduate Education and Extension Divisions and the Mental Hygiene Division. There were 88 registrants. Fifty scholarships of $50 each had been provided by the joint financial sponsorship of the Oklahoma Association for Mental Health and the Mental Hygiene Division.

In June, 1954 Dr. Dana L. Farnsworth, psychiatrist and Medical Director of the Massachusetts Institute of Technology, conducted a lecture tour on Mental Health at six state colleges: Durant, Ada, Edmond, Stillwater, Alva and Weatherford.

For the past three years we have co-sponsored a 1-day mental health conference in Tulsa by paying the travel expense of one of the guest speakers on mental health. These conferences have been held at the Student Union of the University of Tulsa with large attendances of both professional and lay people.

Mental Health Films

In 1953 the Mental Hygiene Division produced three films to promote mental health through visual education; "Retire to Life" and "Adventure in Maturity" are related to problems of advancing years and retirement. "Mental Hospital" is a picture of the resources available in the hospital community. These films have been widely used on a national basis, and two have been cleared for television. The Mental Hygiene Division had earlier produced a film, "Fears of Children" in cooperation with the Mental Health Film Board of New York. The mental hygiene film library has 127 films which are distributed by the Division of Health Education.

County Health Department Mental Hygiene Meetings

Mental Hygiene principles have continued to be promoted through meetings in the county health departments. The medical director of the county health department has called the meetings of health, welfare and educational representatives in his county. Usually a case referred to the medical director has been the focus of discussion, with participation by various members of the group. The Director of the Mental Hygiene Division has contributed to the understanding of dynamics of behavior by informal, indirect teaching. Selected mental health films have been used to augment the case discussions.

During the past two years, group meetings of 20 to 25 persons have been held in county health departments at Shawnee, Muskogee, Wewoka, Okmulgee.

Nursing

The Division of Nursing is primarily concerned with improving the quality and quantity of public health nursing service to the citizens of Oklahoma. Nursing service is an integral part of the total public health program therefore Nursing cooperates with other divisions in planning and carrying out its program. The director, consultants and supervisory staff visit local health departments at regular intervals in order to give on-the-job encouragement and carry out an educational program of in-service training. The educational program in local health departments varies according to staff needs and may

also be planned to study and meet a health problem in a certain community. This program may also be designed to introduce new programs, policies or methods of work in the local health departments as well as to keep the staff informed and up-to-date in modern or changing methods of medical practices. If the program is planned around a community problem, the allied professional groups such as hospital nurses, school teachers, nutritionists and welfare workers are invited to participate.

Since the quality of nursing service depends so completely on the individual nurse and her educational background, this division is indirectly concerned with the basic preparation of the student nurse. This part of the program is carried out by individual membership and active participation in the professional nursing organizations.

Sanitation

A number of statutory functions are included under the heading of general sanitation, such as the sanitation of schools, public institutions, places of public resort, swimming pools, frozen food locker plants, approval of individual sewage disposal systems in areas designated by state statute, water shed sanitation, the providing of advisory service to state and local governments, and assistance to local health departments.

This program also makes available sanitation services in the epidemiological investigation and control of typhoid, salmonellosis, amebiasis, shigellosis, leptospirosis, food poisoning, and any of the diseases transmitted through the medium of contaminated food, milk, water, or by arthropods, which occur as a result of the sanitation of the environment.

At the present time there are three main sectional activities for administrating this program, namely, Food and Drug; Environmental Sanitation; and Water Resources and Wastes Engineering.

The Food and Drug Section is concerned with the inspection of restaurants, all other public eating places, and food handling establishments. Certain standards have been approved and an effort is made to see that the standards are observed and enforced.

Under Environmental Sanitation, problems such as the control of public bathing places, recreational area sanitation, schools, individual water and sewage disposal systems for rural and semi-rural areas and individuals, insect and rodent control, building and plant sanitation, occupational health — working with industry in eliminating exposures detrimental to the health of workers; and milk control. This division also gives consultative and technical services to local health departments.

Under Water Resources, water and sewage control, which is concerned with the construction and maintenance of suitable and appropriate municipal water and sewage disposal plants; and water pollution control — an attempt to keep the streams free of pollution and make them safe for human use.

Tuberculosis Control

Tuberculosis is a reportable disease and remains a major public health problem.

Patients with tuberculosis may be hospitalized at the following sanatoria: Eastern Oklahoma Tuberculosis Sanatorium, Talihina; Western Oklahoma Tuberculosis Sanatorium, Clinton; Shawnee Indian Sanatorium, Shawnee (Indians only); Talihina Medical Center, Talihina (Indians only); and male war veterans may be hospitalized at the State Veterans Hospital, Sulphur. For all sanatoria except Indian, applicants must have been legal residents of Oklahoma for one year prior to admission. Application blanks for admission may be obtained from the local health department, county clerk's office, or State Department of Health.

A tuberculosis case finding program is conducted under the supervision of this division. Regular chest clinics are held in counties with full-time health departments. In counties without full-time health departments, special clinics are held periodically in cooperation with the Oklahoma Tuberculosis Association. Indigent persons with suspected chest disease may be referred to these clinics.

Venereal Disease Control

This division, as the title indicates, concerns itself with the control of venereal diseases. The State Department of Health will assist the physician in completing a diagnosis and will provide treatment for his patient when requested to do so by a physician. A strategically located diagnostic and treatment center that operates exclusively on an outpatient basis is located at 1229 North Kelley, Oklahoma City; Phone, Regent 6-0171. This center is equipped to do a complete venereal disease service, including epidemiology, and physicians are invited to contact the center for consultant service and assistance in the epidemiology of their cases.

Patients may be referred for diagnosis and treatment through local health departments or sent directly to the center by the physician with a referral letter outlining the services which the physician desires for the patient. Penicillin for the treatment of medically indigent patients will be provided upon request of the physician. This request should be made upon a form for the confidential reporting of venereal disease by private physicians. These forms are furnished by the State Department of Health. When requesting penicillin the physician should always enter on the form the amount desired.

It should be remembered that persons suffering from a venereal disease in an infectious stage are subject to the laws of Oklahoma which deal with communicable diseases.

Vital Records and Statistics

This division is responsible for filing and preserving certificates of births, stillbirths, and deaths which attendants and funeral directors first file with local registrars who in turn forward them to the State office. These certificates are required by law to be filed within a very few days following the birth or death.

The standard birth certificate blank may be used to record a birth only when the child is under one year of age. To register the birth of a child who is one to nine years of age requires a special delayed certificate and two affidavits, one of which is to be made by a parent, and the other by the attendant. Registering the birth of a person who is ten years or more of age is accomplished by filing a delayed certificate of birth which requires that documentary proof be submitted to support the facts of birth claimed by the applicant.

Certified copies of birth, death, and stillbirth certificates are issued upon the written and signed request of a qualified applicant for a fee of 50 cents each. Vital records by law are confidential in nature and only those having a "direct interest" in the

matter recorded may receive certified copies. Only the State Registrar of Vital Statistics is authorized to issue certified copies.

The division also collects, compiles, tabulates, and analyzes data derived from live birth, stillbirth, and death certificates, reported cases of disease including malignant neoplasms, and venereal disease clinic activities. Statistical analysis of other public health data is made upon request from other divisions of the State Department of Health and from related organizations and agencies outside the Department.

Continuing publications of the public health statistics service are: weekly report of communicable diseases, quarterly summaries of current birth and death statistics, and three annual publications entitled, *Public Health Statistics of Oklahoma,* Part I, Reportable Diseases; Part II, Births and Deaths; and Part III, Accidental Deaths.

The Oklahoma Commission For Crippled Children

125 N. W. Second Street **Telephone REgent 6-7551** **Oklahoma City, Oklahoma**

IRA E. McCONNELL, Director

A crippled child, under the provisions of the law, is one who is suffering from a condition leading to crippling, or otherwise physically handicapped, or who is suffering from a condition or malady amenable to treatment; is under 21 years of age, whose parent(s) or legal guardian is financially unable to provide the essential medical care.

The Oklahoma Commission for Crippled Children is designated by law as the agency of the State responsible and having authority for the administration and operation of the program of the services for children as stated in the Crippled Children's Act of 1949 as amended, and to supervise generally the administration of any services related to this program but not administered directly by the Commission. The purposes of the program include the development, extension, and improvement of services for locating such children and for providing medical, corrective and other services and care, and facilities for diagnosis, hospitalization, treatment and after-care.

The Commission is composed of the Commissioner of Health (Grady F. Mathews, M.D.), the State Superintendent of Public Instruction (Oliver Hodge), the State Director of Public Welfare (Lloyd E. Rader) the Dean of the Oklahoma University School of Medicine (Mark R. Everett). The Director of the Commission is ex-officio secretary to the Commission.

The professional advisory committee, appointed by the Commission as required by law, is composed of six members, three of whom are doctors of medicine, one a dentist, and two are not designated. This committee acts as an advisory body to the Commission on matters of hospital and medical care standards. Final decisions, however, are the prerogative of the Commission.

Patients may be accepted by the Oklahoma Commission for Crippled Children for treatment upon application by a Judge of the County Court, a county welfare worker, a health official, a licensed physician, or a parent. When the applications are signed by an official of the State Department of Public Welfare, the Commission may be reimbursed for expenditures made in behalf of the child, from the State Assistance Fund (1% of the sales tax). If the application is signed by a Judge of the County Court, the Commission may be reimbursed for expenditures made in behalf of the child, from the County Crippled Children's Budget Account, except none of these funds can be used to pay for services in any state institution.

The Commission is financed in part by State Appropriation, in part from federal funds, in part by reimbursement from the state assistance fund, in part from the county crippled children's budget account, and in part by private funds in partial repayment or expenditures made for services rendered in behalf of a child.

Application forms are available in the offices of the County Judges, the County offices of the State Department of Public Welfare, in most of the hospitals in the State, in the county health departments, and at the offices of the Commission, 125 N. W. Second Street, Oklahoma City, and 1242 E. Fifth Place, Tulsa.

The Oklahoma Hospital for Crippled Children, including its clinics and laboratories, is designated in the law as a service institution for the physically handicapped children of this State, which also serves as a teaching and training hospital for the school of medicine of the Oklahoma University, and the Commission is obligated, in so far as practicable, to use the facilities of the Oklahoma Hospital for Crippled Children to a degree that will enable the University of Oklahoma School of Medicine to maintain its proper patient ratio for accreditation; providing that this provision shall not cause undue hardship to a child.

State of Oklahoma

Department of Mental Health

State Capitol Building Telephone JAckson 8-2195 Oklahoma City, Oklahoma

HAYDEN H. DONAHUE, M. D.
Director

History and Organization

The Department of Mental Health was first established in 1947, after it became apparent that a specialized agency was needed to bring the mental hospitals in the state to a more acceptable standard of care and treatment, and to cope with the ever-increasing toll mental illness has taken on the human resources of the state. The establishment of a specialized Department in Oklahoma was in keeping with a national trend toward awareness of the potentialities of an active treatment, rather than custodial philosophy in the objective of a modern mental hospital.

The Department as it is now constituted is governed by Mental Health Board of seven citizens. The Mental Health Law provides that one member of the Board must be an attorney, one a psychiatrist, and one a physician, chosen by the Governor from lists submitted by the respective associations of the two professions. The Board appoints a Director to serve as the chief administrative officer of the Department, exercising line authority over the superintendents of institutions within the Department. The present Director of Mental Health is Dr. Hayden H. Donahue.

Although the mental health program in Oklahoma still has a long way to go before the many-faceted mental health problem is solved, a great deal of progress has been made in the years since the establishment of the Department. The cost per patient per day has risen from $1.21 in 1947 to a present expenditure of $2.19 — still a long way from the nationally accepted figure of $4.50 to do a really adequate job. One of the first and most fundamental achievements was the reduction in the work day of attendants from twelve to eight hours. Woefully inadequate medical, nursing, rehabilitation, and other professional staffs have been strengthened within the limits of available funds. Training programs in many professional fields have been established in order to train Oklahoma youth, and to place this state in a more competitive position in those professional areas in which the demand for trained personnel far exceeds the supply. These programs will be set forth in more detail below.

Procedures for Admission to a Mental Hospital or School for the Mentally Retarded

1. *Voluntary Application* — In certain screened cases, patients will be accepted for admission on voluntary application. Since the law restricts admissions to psychotic patients, and provides that patients entering voluntarily must be released upon request in writing, even if such release would nullify the treatment program, this type of admission is necessarily limited. In those cases in which it appears that admission voluntarily is desirable and feasible, the superintendent of the hospital to which admission is sought should be contacted.

2. *Court Certification* — The great majority of all patients admitted to state mental hospitals enter through commitment by the county courts. This procedure is initiated by the filing of a petition by certain classes of persons authorized by law. The county judge then causes the alleged mentally ill person and other specified persons to be notified, and appoints a sanity commission composed of two licensed physicians and an attorney to examine the alleged mentally ill person and report to the court, and sets the time for hearing the petition. At the haring, if it is determined that the person against whom the petition was filed is indeed mentally ill, from the report of the sanity commission or any other competent evidence, an order for his admission to a hospital is entered.

3. *Admission For Observation of Those Against Whom Criminal Charges Are Pending* — On the order of a court of competent jurisdiction after a hearing, any individual against whom criminal charges are pending may be ordered into a state hospital for observation and report to the court, for a period not to exceed ninety days.

4. *Admission of Mentally Retarded* — Admission to the Enid State School or Pauls Valley State School of a person who is mentally retarded under the law (a mental age not above that of the average nine year old child) is secured by application of the person's parent or guardian. The superintendent of the school should first be contacted to arrange for a psychometric test. Applications for those found eligible may then be submitted.

An acute shortage of mentally retarded beds exists at the present time (there has been a large waiting list for admission to the Enid State School for the past several years). There is legislation now pending to restrict admission of mentally retarded children below five years chronological age to emergency cases.

Collections Provisions

The Mental Health Law requires the Department to collect a maintenance charge from those patients or their estates who can afford to pay. At the present time this charge is set at a maximum of $52.20 per month for mental hospitals and a maximum of $52.50 for schools for the mentally retarded. The law also provised for a reduction or waiver of payment in the case of those who cannot afford this charge.

It is the policy of the Department that, while every effort will be made to collect from those who can afford payment, we do not wish this provision of the law to work a real hardship on anyone. The superintendent of the institution concerned

should first be contacted in those cases believed inequitable. An appeal to the office of the Director may then be taken, if no satisfactory agreement can be reached at the institutional level.

Stote Mentol Hospitols

1. *Central State Griffin Memorial Hospital* — The largest of the state's hospitals, at Norman, with slightly more than 3,100 patients (including the annex at Lexington), this hospital serves twenty-three central counties of the state.

Because of its size and proximity to the University of Oklahoma and Medical School, this hospital has been designated as the Research and Training Center for the Mental Health system. All of the treatment services established, in any hospital are available here, as follows:

Receiving	N.P. - T.B.
Acute Intensive	Medicine
Convalescent	Surgery
Continuous Treatment	Geriatrics
Ortho Psychiatric	

The following programs are also now established at this hospital:

1. The hospital is now approved for a two year residency training program for psychiatrists. In addition residents in surgery and medicine are rotating from the University of Oklahoma Medical School at six month intervals through these services at the hospital.

2. An internship for psychologists is maintained.

3. An internship for clinically trained chaplains has been established within the past 18 months.

4. The affiliate nurse training program, first established in 1949, has been reorganized and restaffed.

5. A two year collegiate technical nurse training program was established in the fall of 1953.

6. The Dental Consultant committee of the Oklahoma Dental Association has completed plans to set up a dental internship program.

7. All the above programs have been aided by the establishment of a modern research and training area, with laboratory areas, a 1500 book library, classrooms, projection rooms, and one way view study areas.

2. *Eastern State Hospital* — This hospital of more than 2500 bed serves counties from a large area from the eastern part of the state. It is located approximately two miles north of Vinita. Dr. F. M. Adams has headed the Eastern State Hospital since its establishment in 1913.

The hospital has been able to markedly increase its medical and other professional staff within the past eighteen months. Also, through the use of consulting surgeons from Tulsa, the hospital has for some time carried on an extensive neuro-surgery program.

Early this year, the hospital reorganized its occupational therapy department in a building built for that purpose under the building bond program. A trained occupational therapist was employed to head the program.

3. *Western State Hospital* — This hospital, with a population of approximately 1400 patients, occupies the site of the old army post of Fort Supply. The hospital serves some 29 counties from the western and north central part of the state.

This hospital now has a young and energetic staff that is maintaining the programs of the hospital at a high professional level. Evidence of this is found in the fact that two pharmaceutical houses furnished the hospital thousands of dollars worth of the new drugs thorazaine and serpaseil for the purpose of carrying out detailed and lengthy evaluations of these drugs. The hospitals study of the first drug has been completed, and papers are now being prepared for publication in the professional journals.

The Western State Hospital will also begin for the first time in July of this year an affiliate nursing program. This program has been approved by the American Psychiatric Association and the Oklahoma State Board of Nurse Registration and Nursing Education, and will accept twelve professional nursing students each quarter.

The hospital is also in the process of building an acceptable professional library.

Practically all of the modern treatment therapies, including a new well-equipped insulin therapy unit, are now available at the hospital.

4. *Taft State Hospital* — The Taft State Hospital, with a population of almost 900, is maintained for all negro mentally ill and mentally retarded in the state.

Because of the acute shortage of Negro psysicians trained in psychiatry, it has not been possible as yet to materially strengthen the medical staff of the hospital. Adjunctive staffs — psychology, social service, and nursing — have been improved and strengthened within the last two years. Marked improement in the food service has also been made.

The cleanliness and general repair of the plant at the hospital has also been improved considerably recently. At present a project is underway to install a new heating system in one wing of the hospital where heating has been inadequate for a number of years.

Schools for Mentolly Retorded

5. *Enid State School* — The Enid State School, with a population of some 1400 pupils, is one of the outstanding institutions of its kind in the country as evidence by an award for outstanding achievement from the American Psychiatric Association 1953. The school now serves counties from the northern and central portion of the state.

Some of the programs recently established at the school include a country store for pupils, in which the pupils use their own "scrip" money for their purchases; and a playground with a genuine train engine running on a lengthy track. Construction is just beginning for a new swimming pool.

6. *Pauls Valley State School* — This school of some 500 beds was converted from a hospital for epileptics in 1953, and serves counties from the southern district of the state.

Since the conversion from hospitals to school, the entire population of the hospital has been surveyed. A considerable number of transfers to mental hospitals of those pupils found to be psychotic have been effected, and a few of the former hospital patients have been discharged.

In the conversion process, a good many of the new facilities at the school have had to be on a makeshift basis. Infirmary beds were set up in a hospital building of the building bond program. School classrooms were established after working over an old army barrack building moved to the institution for employee housing after the war.

In spite of these deficiencies, the school has come a long way toward meeting a still acute need for more beds for the mentally retarded in Oklahoma.

State Veterans Department of Oklahoma

State Historical Building, Room 2 JAcksan 5-3546 Oklahama City, Oklahama

DON DAVIS, Director JOHN H. SPARKMAN, Deputy Director

WILL G. CRANDALL, M.D., Supt.
State Veterans Hospital
Telephone 850 and 851
Sulphur, Oklahoma

JACK MEREDITH, Hospital Officer
Veterans Administration Hospital
Telephone MUrray 2-2771
Muskogee, Oklahoma

WILBUR HENLINE, Manager
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Oklahoma City, Oklahoma

HOWARD J. LINDELL, Supt.
Oklahoma Veterans Home
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Ardmore, Oklahoma

TIM TURNBULL, Hospital Officer
Veterans Administration Hospital
Telephone FOrest 5-2707
Oklahoma City, Oklahoma

TED THOMPSON, Manager
State Veterans Dept. Service Office
c/o Veterans Administration
2nd and Court Streets
Telephone MUrray 7-5301
Muskogee, Oklahoma

Claims and Services

The State Veterans Department assists veterans in all problems with which they are confronted in the field of veterans' affairs. The bulk of the work consists of assisting the veterans in filing applications for disability compensation, pension and death pension, as well as out-patient treatment and hospitalization. There is a staff maintained in the Veterans Administration Regional Office at Muskogee and Oklahoma City whose primary responsibility it is to represent veterans and their dependents before the Rating Boards on matters concerning disability compensation, pensions and death benefits. They assist the veteran in that they help to evaluate evidence presented by the veteran on his claim as well as prepare his case for presentation. The field representatives of the State Veterans Department travel throughout the State on an itinerate basis, serving each county seat town and larger communities of the State once each week and the smaller communities once every ten days to two weeks. They work through the Service Officers of the local posts of the American Legion, Veterans of Foreign Wars and Disabled American Veterans. These representatives are well qualified to assist veterans and their dependents in preparing claims for the Veterans Administration and securing hospitalization and out-patient treatment as well as assisting in any other phase of veterans' affairs. They are at the service of the people in their communities and will render any assistance to any person who is attempting to help a veteran. They may be reached generally through the service officers of the local veterans organization post. With their reputation and contacts, it is often possible for them to secure assistance for the veteran when other means have failed.

State Veterans Hospital

The State Veterans Hospital is located at Sulphur, Oklahoma, and is the direct responsibility of the War Veterans Commission. The hospital has 125 beds for tubercular patients and 107 beds for general medical and surgical cases. The surgery is limited to the less complicated cases. Veterans who have been honorably discharged and have been legal residents of the State of Oklahoma for at least one year are eligible for admission. Generally speaking it is best for the veteran's doctor to contact the hospital for admission; however, in emergency cases, anyone may call the Superintendent for admission. The Hospital is well staffed and is probably the best maintained State institution in Oklahoma.

Oklahoma Veterans Home

The Oklahoma Veterans Home at Ardmore, Oklahoma was established by the 1949 Legislature. The Home has a 211-bed capacity. Veterans who have a chronic or convalescent disability of sufficient severity to prevent them from earning a living will be admitted if they have been honorably discharged and have been a legal resident of the State of Oklahoma for at least ten years, two of which must have been immediately preceding application to the home. All applicants will be examined physically at the State Veterans Hospital in Sulphur before admission to the Home. Inquiries should be directed to: Superintendent, Oklahoma Veterans Home, P. O. Box 985, Ardmore, Oklahoma.

University Hospital Veterans Ward

The War Veterans Commission, in an agreement with the University Hospital, had available a 32-bed ward for Oklahoma veterans. Due to changes in the University Hospital set-up, this ward has been disposed of, although through the cooperation of the University Hospital, we are still able to obtain admission for eligible veterans. Veterans that cannot be placed in the other veterans hospitals and are in need of treatment at University Hospital should contact Tim Turnbull, in care of the Veterans Administration Hospital, Room B-12, Oklahoma City, Oklahoma, or the Service Officer of the American Legion, Veterans of Foreign Wars or Disabled American Veterans for admission. In the event of an emergency case, anyone may call the University Hospitalization Officer or physician on duty for admission.

Veterans Administration

V. A. Hospital—921 N. E. 13th Street FOrest 5-9421 Oklahoma City, Oklahoma*

CLARENCE E. BATES, M.D., Manager CHAS. W. ROBINSON, M.D., Chief Out-Patient Service

V. A. Hospital, Memorial Station
Honor Heights Drive, Muskogee, Oklahoma
(Eastern 30 Counties)—Telephone 5430
Daniel H. Miller, M.D., Manager

V. A. Regional Office, 2nd & Court Streets,
Muskogee, Okla., (Eastern 30 Counties)
Telephone 7020
H. B. Melchert, M.D., Chief Medical Officer

Information Regarding Procedures of VA

Section I

Out-Patient Treatment

1. *General Information:* Normally, a veteran living in the vicinity of a Veterans Administration Clinic or Hospital, will be referred to the facility for Out-Patient treatment. Treatment by fee-basis physician may be authorized, provided: (a) Veterans Administration facilities are not feasibly available; (b) Would be a physical hardship for the veteran to travel to the Veterans Administration facility; (c) The best interests of the veteran and the government could be served. The veteran's name and "C" number should be listed on any correspondence submitted to the Veterans Administration.

2. *Eligibility:* Generally speaking, veterans are eligible for Out-Patient treatment of service-connected disabilities provided it is medically indicated. Some veterans in training under Public Law 16 or Public Law 894, are eligible for certain treatment to prevent interruption of training.

3. *Authority for Treatment:* Authorization of treatment to fee-basis physicians is issued in response to a request from the veteran or from his doctor. These requests are usually made by letter or, in case of an emergency, by telephone. Authorizations are issued by the Chief, Out-Patient Service, Veterans Administration Hospital in Oklahoma City, or by the Chief Medical Officer at the Veterans Administration Regional Office in Muskogee. Authorizations for continued treatment are usually issued on a monthly basis.

Requests for out-patient treatment, initial or continuous, must be submitted prior to the rendition of treatment. Claims for services rendered prior to obtaining an authorization, must be disallowed. The only exception to the above is the rendition of emergent treatment. Requests for emergent treatment must be submitted immediately, or not more than fifteen (15) days after the treatment was initially begun. Requests for emergent treatment authorization must fully describe the nature of the emergency.

4. a *Reports of Treatment and Authority to Continue Treatment:* Attached to the original authority to initiate treatment, are necessary forms to submit a report of the medical treatment rendered and request to continue treatment. The report of medical treatment rendered should be submitted at the end of each month and a final report at the conclusion of treatment.

b. If the fee-basis physician feels the veteran will require treatment during the succeeding month, Form 2690-B, "Request to Continue Treatment," should be submitted by the 23rd of the month prior to the time the treatment should be rendered.

Section II

Hospitalization

1. *General Information:* Request for hospitalization or domiciliary care should be initiated by a veteran or his representative on VA Form 10-P-10. Veterans can usually secure these forms from the Veterans Administration or from service organizations such as the American Legion, Veterans of Foreign Wars, Red Cross, Disabled American Veterans, etc. After the examining physician has completed the medical certificate on this form, it should be mailed to the nearest Veterans Administration Hospital in the nearest Veterans Administration facility.

2. *Emergency Hospitalization:* In case of medical emergency, requiring hospitalization, the veteran's physician should telephone the Admitting Officer of the nearest Veterans Administration Hospital. In addition to pertinent medical findings, the Admitting Officer will need information as to "C" number, if known, dates of military service and character of discharge.

3. *Private Hospitalization at VA Expense:* A veteran may be hospitalized in a private hospital *for a service-connected disability* after it has been determined that there is no bed available in a Veterans Administration Hospital or the condition of the patient would render it hazardous to his life or health to transport him to such a hospital. Authority for such hospitalization should be secured in advance by telephone from the Admitting Officer of the Veterans Administration Hospital in Oklahoma City or the Chief Medical Officer at the Muskogee Regional Office. In cases of extreme emergency, authority will be granted if requested within seventy-two hours after admission.

Section III

Prescriptions

Fee-basis physicians authorized to treat a veteran on an out-patient basis may initiate prescriptions for medication or medical requisites necessary for treatment of the condition for which authorized. The legend *"I am authorized to treat and prescribe for the above-named Veterans Administration patient"* must be placed on the prescription above the prescriber's signature. Pharmacies which are members of the State Pharmaceutical Association will honor this type of prescription and obtain reimbursement through their state association. In case there are no participating pharmacies in your community, please refer the prescription to the authorizing Veterans Administration office to be filled and mailed to the veteran.

*In Oklahoma City, the Out-Patient Medical Activities formerly located at the Regional Office, 1101 North Broadway, were consolidated with the VA Hospital on January 31, 1955.

State Board of Vocational Education

Vocational Rehabilitation Division

125 N. W. 2nd Street Telephone RE 6-7551 Oklahoma City, Oklahoma

VOYLE C. SCURLOCK, Director

The Vocational Rehabilitation Division of the State Board for Vocational Education has functioned in Oklahoma since 1925. Its activity can be defined as an extension of the public school system to a selected group of disabled persons. Its purpose is to give such services as are necessary to enable the impaired individuals to enter, or re-enter, employment in industry where they can make the best use of their skills and abilities.

Eligibility

The minimum age limit is sixteen years; there is no maximum age limit, but the applicant must not be too old to be reasonably expected to resume employment of some type. Each applicant must have a permanent defect, but must be physically able and mentally capable of carrying on successfully in employment on a competitive basis. He must have potentialities such that he can be expected to develop a marketable skill as a result of the service provided for him.

Functions

The services of Vocational Rehabilitation are in the following areas:

1. Vocational Guidance.

The client is given information and advice as to vocational opportunities as well as the physical, mental, educational, temperamental and social requirements of various occupational fields.

The individual counseling and advice is given in the selection of a suitable job objective. The counseling is based on a study of the individual's physical, mental, social and economic assets and liabilities as well as on available training and employment opportunities.

2. Physical Restoration

Medical, surgical, psychiatric, and dental care may be given to remove or reduce a disability that creates an occupational handicap. These services are provided only when the client is financially unable to provide them for himself.

Prostheses may be furnished, on a basis of need, if the client's ability to function on the job can be improved thereby.

3. Vocational Training

Arrangements may be made for any type of training that is vocational in nature and will lead toward a definite line of work. It may be given in a state institution, a private trade or commercial school, through a private tutor or in a commercial or industrial establishment. The cost of tuition, books, tools, and instructional supplies may be provided. Maintenance on a basis of need may be given during the training period. Counseling and supervision are provided during the training period to assure that the training is sufficiently thorough and of such nature as to be effective.

4. Selective Placement

Selective placement is that service which assists the client in finding the occupation best suited to his physical and mental capabilities. Jobs are analyzed to determine which ones may be held by individuals with various handicaps. The individual client is studied to determine the position for which he is best suited.

Counsel and advice are given in regard to making applications for jobs, contacting employers, adjusting to work routines, cooperating with co-workers, and whatever seems indicated to help the client adapt himself to industry. Follow-up is maintained for a reasonable length of time after employment is secured to be certain that the client has made the necessary adjustments and for the purpose of determining that his rehabilitation is complete.

Physical Restoration Program

Prior to 1943, the Vocational Rehabilitation Service had no funds for medical care. The vocational training program was planned around the client's disability, since there was no other provision for the care of the indigent person with a disability, particularly those needing remedial or elective treatment.

Federal legislation (1943) made funds available to states and territories to provide treatment for the permanently disabled person who cannot provide such treatment for himself. It is not a general medical program and does not include the care of the acutely ill. Indigent clients whose occupational handicap can be removed or reduced by treatment are eligible for this service.

1. Program Direction

A medical and a psychiatric consultant, functioning on a part time basis, head up this service. They advise in regard to the execution of policies for physical restoration, assisting the agency in its contacts with the medical and associated professions and in the maintenance of standards established for the selection of physicians, hospitals, and other professional personnel and facilities necessary to the proper functioning of the program.

The medical care program is directly supervised by a medical social worker withe a master's degree in her profession. She has a number of years experience in hospital and public medical care programs. She works under the direction of the medical and psychiatric consultants.

2. Medical Advisory Committee

Realizing the impossibility of working out such a plan without the advice and close cooperation of the medical profession, the State Board for Vocational Education asked the Oklahoma State Medical Association, the Oklahoma State Dental Society, and the Oklahoma State Hospital Association to appoint members for an advisory committee to work with the Directory, the medical consultants, and the supervisor of physical restoration.

Its duties are those of advising on the policies and procedures of a statewide medical care plan. The problem of setting up standards for physicians and surgeons participating in the program, fees to be paid for their services, standards for hospitalization and fees to be paid hospitals, standards for related personnel and items needed to carry out a medical treatment plan fees to be paid for such services have been established by the advistory com-

mittee. The committee does not deal with individual cases but with the over-all policies guiding the program.

3. Types of Cases Accepted

Any condition, regardless of its physical or mental origin, that is an impediment to the individual's occupational performance, is relatively stable, and is amenable to treatment so that it can be remedied to a substantial degree in a reasonable length of time is acceptable. The provisions eliminate the acutely ill and the long-time chronic cases who do not respond to treatment and who are, therefore, not able to profit by assistance. Survery of cosmetic value may be provided if the condition mitigates against the client's securing the type of work for which he is fitted or if it creates an emotional handicap.

Dental care is provided for an individual whose vocational handicap is caused by, or seriously aggravated by, a dental problem. This service does not take care of minor dental needs but of major conditions which constitute or create a vocational disability. It is provided only to those who are unable to pay for the service themselves. Fees paid to dentists are those approved by the Oklahoma State Dental Society.

Psychiatric care is provided for those who can be rehabilitated by it. In the past, only physical disabilities were considered in this program. Now, however, individuals who are vocationally handicapped because of mental illness are accepted for service. This is necessarily a highly selected group because of the lack of adequate facilities for psychiatric care in the state as well as the lack of experience in handling such individuals on the part of the agency's staff. Following complete physical and psychiatric examinations, an individual may be accepted for vocational rehabilitation services if, in the opinion of the psychiatrist, a properly selected job or suitable training would rehabilitate him.

The individual with the obvious disability — the loss of a limb, blindness, deafness, or paralysis — was formerly the only client referred to this service. Other permanently disabled persons, however, may be in need of rehabilitation. The types accepted by the agency include the epileptic, the diabetic, the arrested tuberculosis case, and the cardiac cripple.

Since August, 1951 the severely disabled person in Oklahoma has been given a new opportunity. At that time, a Department of Physical Medicine and Rehabilitation was opened at the Oklahoma A. & M. School of Technical Training, Okmulgee, Oklahoma.

The Department is called the "Rehabilitation Center" and occupies a number of wings of the old Glennan General Hospital. Dr. Shelby Gamble, Physiatrist, is the medical director. Inquiries regarding the rehabilitation of paraplegics, amputees, post-polios, etc., should be directed by Dr. Gamble.

State of Oklahoma

Department of Public Welfare

Capitol Office Building **JA 8-7561** **Oklahoma City, Oklahoma**

C. P. BONDURANT, M.D., Chairman
Oklahoma Public Welfare Commission

L. E. RADER
Director of Public Welfare

The Oklahoma Social Security Amendment, adopted July 1936, provides for the relief and care of needy aged persons, and of other needy persons who, because of immature age, physical infirmity, disability, or other causes are unable to provide for themselves. The Department is under the control of the Oklahoma Public Welfare Commission, a nine-member body appointed by the Governor. This group is responsible for the selection of the Director.

The Department is financed from the State Assistance Fund, derived from the two per cent sales tax, supplemented by Federal funds from the Social Security Administration on a basis which provides more than fifty per cent of all funds expended.

The relief and services which the Department is charged by law for providing to the needy persons of the State are given through a number of programs which are separate for administrative and auditing purposes but which are closely related in the interest of providing a well-rounded service to the needy individual or family.

Public assistance is provided to four groups of persons in Oklahoma. These groups, commonly referred to as categories, include the aged, the blind, the disabled, and dependent children. Three of these groups have been added since the inception of the program in 1936. The fourth group has been added since July 1, 1951, at which time Federal legislation was enacted which provided Federal matching for disabled persons, in addition to the other three groups. In all categories, economic need is a factor of eligibility. The Department determines the amount of payment to recipients on the basis of a budget which measures each client's basic requirements for food, clothing, shelter, utilities, personal and household maintenance items and a $500 allowance for medicine. The client's resources are then supplemented from the Department's assistance funds as necessary to meet these requirements.

Through the old-age assistance program, the Department granted assistance during the fiscal year ending June 30, 1954, to an average of 95,206 recipients each month. This represented an average expenditure of $5,569,429.00, or an average payment of $58.50 per month. In addition to being in need, individuals must be sixty-five years of age or older and must be a resident of Oklahoma in order to qualify for old-age assistance. Seventy-six per cent of the total state assistance fund is earmarked by law for the aged. It has been possible to help members of the group according to their full monthly budget needs and since April 1952, the amount of the payment has not been subject to any maximum.

Through the program of Aid to the Blind, needy residents with visual acuity of 20-200 or less are similarly assisted. Through this program, the Department granted assistance during the fiscal year ending June 30, 1954, to an average of 2,211 recipients each month. This represented an average monthly expenditure of $148,458.00, or an average payment of $67.15. Funds have also permitted rendering assistance to this group according to their full

need as determined by the Department's budget, and without limit to any specific maximum. Two per cent of the sales tax accredited to the State Assistance fund is earmarked for Aid to the Blind.

Aid to Dependent Children is extended to children in their own home who are deprived of care or support because a parent is dead, ill or absent from the home. It is the objective of this program that no child shall be deprived of a home with his own family by reason of poverty alone, due to the loss of wage earner in the family. Through the Aid to Dependent Children program, the Department granted assistance during the fiscal year ending June 30, 1954 to an average of 15,815 families each month. This represented an average of 39,805 children. The average monthly expenditure amounted to $1,138,-689.00, or an average payment of $72.00 per month, per family. Of the total sales tax accredited to the State assistance fund, thirteen per cent is earmarked for Aid to Dependent Children.

Aid to the Permanently and Totally Disabled was granted to an average of 4,776 persons each month during the fiscal year, ending June 30, 1954. This represented a monthly average expenditure of $264,-834.00, or an average payment of $55.45. Two and five tenths per cent of the total State assistance fund is allocated to this category.

A permanent disability is defined as a condition for which there is no known therapy which gives reasonable expectation of curing or controlling the disability within the foreseeable future or one which is static as long as therapy is not available to the patient. The patient is considered totally disabled if the permanent disability results in impaired function to the extent that gainful or useful work is precluded.

A Medical Review Team, consisting of a Medical Consultant and a Medical Social Worker, reviews the medical and social information of applicants and recipients of Aid to the Disabled and makes the final decision as to eligibility on the factor of disability. Also, the Medical Review Team makes the final decision on the factor of disability of applicants for Aid to Dependent Children.

Funds available to the Department have never permitted the inclusion of medical and hospital services along with food, shelter, etc., as items of a basic standard budget. It has been possible to provide nursing or attendant care to those in need of this service and it has also been possible to provide each person with an allowance for medicine and drugs in the amount of $5.00. So long as the Department funds are sufficient to provide only the so-called "basic necessities" for all cases, the Commission deems it inadvisable to reduce the standards for those necessities in order to provide any medical or hospital service beyond what is prescribed above.

Since illness is an important factor in causing economic dependency, it is a continuing objective of the Department to mobilize health resources for the treatment of illness and to aid each client in planning to avail himself of the opportunity to make use of such resources. The medical needs of many persons in all categories are met through other State facilities and programs, such as Crippled Children, University Hospitals, State-owned hospitals, Vocational Rehabilitation and the Public Health Department. Facilities for special groups such as Veterans and Indians, also serve many assistance recipients. County indigent funds of the County Commissioners are used to pay for needed medical services for many assistance recipients throughout the State.

The inauguration of the assistance program for Aid to the Permanently and Totally Disabled in July 1951, gave added evidence of the importance of health problems in causing economic dependency. All individuals aided through this program are, by definition, handicapped or ill. It has been the department's policy in this program, as in the other groups to evaluate every possibility of rehabilitation and of improvement through medical service and to aid each individual client in locating and making use of any available facilities through which the needed service might be secured.

Child Welfare provides specialized services in the field of child care, including preventive and protective services. This service is made available through the district offices of the Division. In addition to this service, state services are made available to encourage community child welfare programs. Child Welfare is also responsible for the supervision of the Crippled Children's Assistance program under the State Assistance Fund.

Child Welfare gives services to children in their own homes. For the child who needs care away from his own home, Child Welfare arranges for placement of the child in a foster home or in an institution, depending upon the needs of the individual child. For those children committed to Child Welfare by the County Courts for the purpose of finding an adoptive home, a study is made of the child in order to select adoptive parents who can meet the child's needs.

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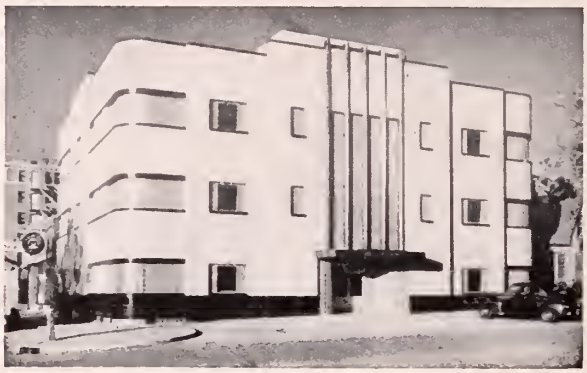

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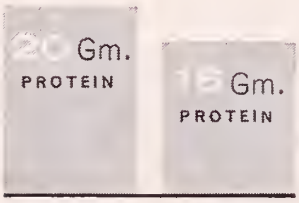

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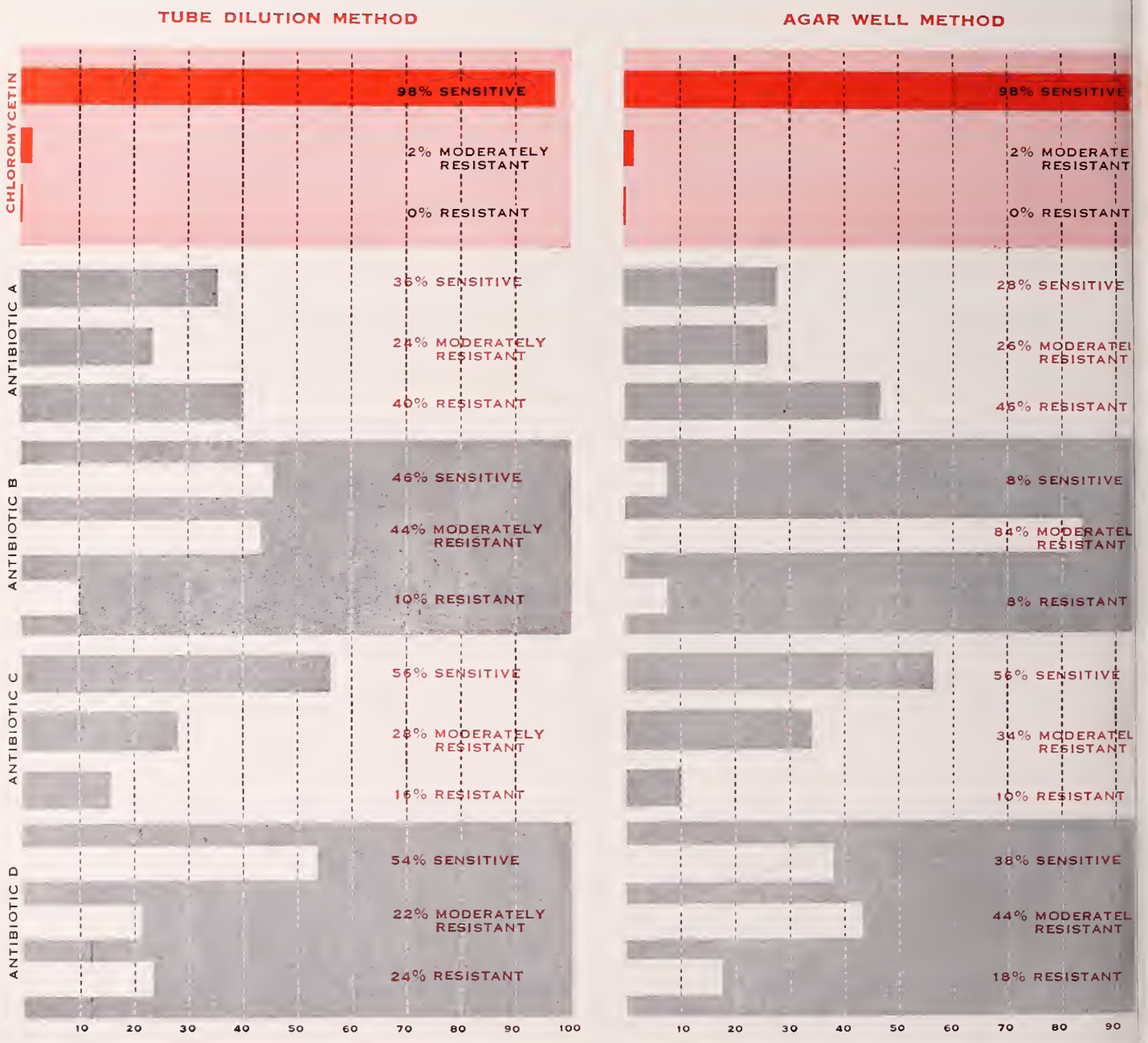

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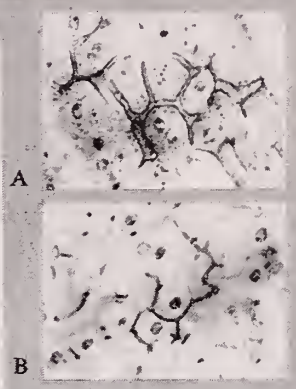
for patients with liver and gallbladder disorders

confirmed in the laboratory

In the isolated perfused liver (rat), *hydro*choleresis with *Decholin Sodium* increases bile flow 200 to 300 per cent—*with no increase in total solids.*[2]

(A) *Hydro*choleresis: Bile capillaries (rabbit liver) are filled with dilute bile 15 minutes after i.v. injection of sodium dehydrocholate.

(B) Untreated control.



Photomicrographs Demonstrate *Hydro*choleresis: Increased Secretion of Highly Dilute Bile[1]

confirmed in practice

"true hydrocholeresis —a marked increase both in volume and fluidity of the bile"[3]

"Since bile of this nature and in this large output can flush out even the smaller and more tortuous biliary radicles, hydrocholeresis [with *Decholin* and *Decholin Sodium*] aids in removal of inspissated material and combats infection."[3]

Decholin® – Decholin Sodium®

Decholin Tablets (dehydrocholic acid, *Ames*) 3¾ gr. (0.25 Gm.). *Decholin Sodium* (sodium dehydrocholate, *Ames*) 20% aqueous solution; ampuls of 3 cc., 5 cc. and 10 cc.

(1) Clara, M.: Med. Monatsschr. *7*:356, 1953. (2) Brauer, R. W., and Pessotti, R. L.: Science *115*:142, 1952. (3) Schwimmer, D.; Boyd, L. J., and Rubin, S. H.: Bull. New York M. Coll. *16*:102, 1953.

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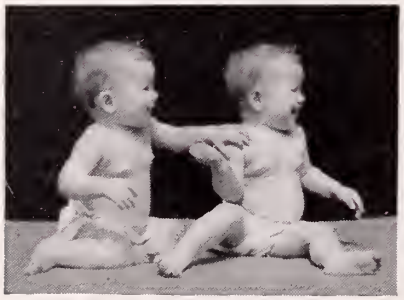
for strong, sturdy, solid growth

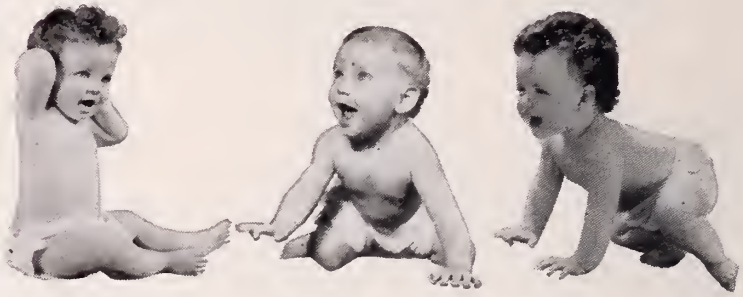
Lactum

LIQUID OR POWDERED

NUTRITIONALLY SOUND FORMULA FOR INFANTS

Lactum®-fed babies get all the proved benefits of a cow's milk and Dextri-Maltose® formula. Mothers appreciate the convenience and simplicity of this ready-prepared formula. Physicians are assured the important protein margin of safety for sturdy growth.





Lactum-fed babies are typically sturdy babies because Lactum supplies ample protein for sound growth and development.

The generous protein intake of babies fed milk and carbohydrate formulas such as Lactum promotes the formation of muscle mass. It also provides for good tissue turgor and excellent motor development.[1]

(1) Jeans, P. C., in A. M. A. Handbook of Nutrition, ed. 2, Philadelphia, Blakiston, 1951, pp. 275-278.

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